

67TH CONGRESS }
2d Session }

HOUSE OF REPRESENTATIVES

{ DOCUMENT
{ No. 399

UNITED STATES
DEPARTMENT OF AGRICULTURE

YEARBOOK 1921

WASHINGTON
GOVERNMENT PRINTING OFFICE
1922

Organization of U. S. Department of Agriculture.

Corrected to July 5, 1922.

Secretary of Agriculture, HENRY C. WALLACE.
Assistant Secretary of Agriculture, C. W. PUGSLEY.
Director of Scientific Work, E. D. BALL.
Director of Regulatory Work, ———.
Administrative Assistants, W. A. JUMP, H. M. BAIN.
Chief Clerk, R. M. REESE.
Solicitor, ROBERT W. WILLIAMS.
Weather Bureau, CHARLES F. MARVIN, *Chief*.
Bureau of Animal Industry, JOHN R. MOHLER, *Chief*.
Bureau of Plant Industry, WILLIAM A. TAYLOR, *Plant Pathologist and
Physiologist, and Chief*.
Forest Service, WILLIAM B. GREELEY, *Forester and Chief*.
Bureau of Chemistry, WALTER G. CAMPBELL, *Acting Chief*.
Bureau of Soils, MILTON WHITNEY, *Soil Physicist and Chief*.
Bureau of Entomology, L. O. HOWARD, *Entomologist and Chief*.
Bureau of Biological Survey, EDWARD W. NELSON, *Biologist and Chief*.
Division of Accounts and Disbursements, A. ZAPPONE, *Chief and Dis-
bursing Clerk*.
Division of Publications, JOHN L. COBBS, Jr., *Chief*.
States Relations Service, A. C. TRUE, *Director*.
Bureau of Public Roads, THOMAS H. MACDONALD, *Chief*.
Bureau of Agricultural Economics, HENRY C. TAYLOR, *Chief*.
Packers and Stockyards Administration, CHESTER MORRILL, *Assistant
to the Secretary of Agriculture*.
Administration of Grain Future Trading Act, CHESTER MORRILL, *As-
sistant to the Secretary of Agriculture*.
Insecticide and Fungicide Board, J. K. HAYWOOD, *Chairman*.
Federal Horticultural Board, C. L. MARLATT, *Chairman*.
Fixed Nitrogen Research Laboratory, RICHARD C. TOLMAN, *Director*.
Librarian, CLARIBEL R. BARNETT.
Editor, EDWIN C. POWELL.

FOREWORD.

THE Yearbook for 1921 is a departure from previous Yearbooks. It represents an effort to present in a somewhat detailed way the economic situation with respect to four of our principal agricultural products—wheat, corn, beef, and cotton. The subject is treated in four separate chapters. These discussions take the place of the briefer, less comprehensive articles, chiefly on production subjects, presented in previous Yearbooks. A graphic summary of the agricultural census of 1920 is added, and the statistical section has been strengthened by the inclusion of cost of production data and by some new statistics of marketing and production.

The Yearbook for 1921, therefore, emphasizes the economic side of our agriculture, because help in their economic problems is now the most urgent need of our farmers. That is not to say that the Department of Agriculture is losing sight of production matters. The farmer needs all the help in his production problems that the department and the agricultural colleges and experiment stations can give him, but the thing of most importance now is the development of an entirely new realm of organized knowledge bearing upon the economic factors of agriculture, looking toward cheaper production, improved methods of distribution, and the enlargement of markets, all to the end that prices the farmer receives shall be more fairly related to his cost of production.

While the present volume treats only of four phases of the situation, succeeding volumes will take up other products and conditions, so that in the course of a few years a fairly complete picture of the whole economic situation may be presented.

It is hoped that the discussions in this book, which have been prepared with a great deal of attention to accuracy and clearness, will contribute something to a better understanding of the serious economic problems which must be met if our agriculture is to be established on a sound, enduring basis.

HENRY C. WALLACE,
Secretary of Agriculture.

CONTENTS.

	Page
The Year in Agriculture-----	1
H. C. WALLACE.	
Wheat Production and Marketing-----	77
C. R. BALL, C. E. LEIGHTY, O. C. STINE, and O. E. BAKER.	
The Corn Crop-----	161
C. E. LEIGHTY, C. W. WARBURTON, O. C. STINE, and O. E. BAKER.	
Our Beef Supply-----	227
E. W. SHEETS, O. E. BAKER, C. E. GIBBONS, O. C. STINE, and R. H. WILCOX.	
The Cotton Situation-----	323
A. M. AGELASTO, C. B. DOYLE, G. S. MELOY, and O. C. STINE.	
A Graphic Summary of American Agriculture-----	407
O. E. BAKER.	
Appendix:	
Statistics of Grain Crops, 1921-----	507
Statistics of Crops Other than Grain Crops-----	581
Live Stock, 1921-----	675
Imports and Exports of Agricultural Products--	737
Miscellaneous Agricultural Statistics-----	770
Cost Data for Farm Products-----	804
Index -----	847



WASHINGTON, D. C., *November 15, 1921.*

To the PRESIDENT:

Before reporting in detail on the work of the Department of Agriculture during the past year, it seems proper to speak of the condition of agriculture in the Nation. The experiences of recent years have shown more clearly than ever before that an efficient agriculture is of vital importance to all the people. During the darkest days of the war success or failure turned on an adequate food supply. Every discovery that reduces the cost of production or increases the efficiency and economy of distribution of farm products benefits all consumers. Any circumstances which depress agriculture, making it impossible to exchange products of the farm for the products of the factory on a fairly normal basis, make for closed factories and unemployment in industries. The promotion of our agriculture is, therefore, in the interest of all the people. Conditions which are harmful to the producers and which tend to jeopardize future production must be noted with concern by all of our people and the national energy should be turned toward improving such conditions.

The farmer receives his money wages in the form of payment for his crops and live stock. These wages are not paid regularly every week or every month, except in part in the case of some dairy farmers, but at irregular intervals varying from three months to a year or more, depending upon the nature of the crop. Neither rate of wages nor hours of work is agreed upon in advance. The consuming public pays, but it makes no agreement as to the amount it will pay. The farmer is urged to produce abundantly, but the price

paid him for what he produces is set after the amount of his production is known. The buyers drive the shrewdest possible bargain. The more the farmer produces, the less the buyers want to pay. Thus we have large production penalized. Very often—indeed, it is the general rule—a

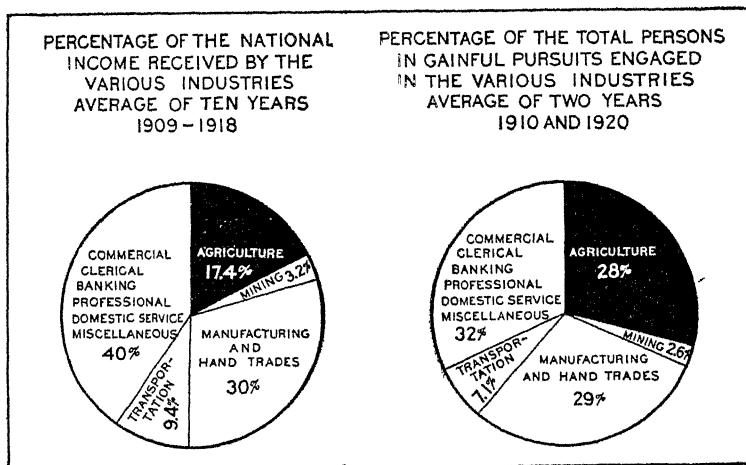


FIG. 1.—Twenty-eight per cent of the people of the United States gainfully employed are engaged in agriculture, but they receive only about 17 per cent of the total national income. The average annual per capita income of the people engaged in agriculture during the 10 years 1909-1918 was only a little over half that of the people engaged in the other major industries. These figures are taken from the U. S. Census of Occupations and from a survey of "Income in the United States," prepared by Mitchell, King, MacCauley, and Knauth, and published by the National Bureau of Economic Research.

large crop brings the farmer fewer total dollars than a small crop. And often a large crop sells at less than it costs the farmer on an average to produce it. Such is the condition this year. The energy and the intelligence with which the farmer works, the number of hours he works, the cost he incurs in producing crops—none of these is considered in determining the price.

Farmer Produces on Faith.

The farmer, therefore, must work on faith. He must himself carry all the risks of weather, of heat and cold, of flood and drought, of destructive storms, of insect pests, and plant and animal diseases. He must plant enough to make sure that there will be food for all, with the practical

NOTE.—Illustrations added since original edition of this report; statistical tables revised.

certainty that in unusually favorable seasons the result may be a large surplus, and that this surplus, which can not be hidden, probably will cause prices lower than the actual cost of production. He must be willing to accept these low prices with the best grace possible and adjust his living expenses to meet his reduced income. The American farmer always has done this. He is a philosopher, as every man must be who works with nature and is subject to nature's varying moods. And he feels his responsibility to feed the people. If the farmers of America should cease work for a single crop season, millions upon millions of people would suffer for food. They have never ceased to work, no matter what the trials and hardships.

In an orderly world the farmers are able one year with another to so adjust their production to the needs of consumption as to enjoy a fairly reasonable share of the national prosperity. During the period of development when farm land is increasing in value, landowners look upon the enhanced value of their land as accumulated compensation to offset unprofitable crop years. This thought has consoled them under many distressing conditions of crop failures and low prices. As they advance in age and come to the time when they must cease hard work, they have been able to profit by this accumulated value either by sale of the farm or by renting on the basis of value. The people of America have until very recent years been fed at a price below the actual cost of producing farm crops, if all of the factors which properly enter into that cost are considered and if the farmer should be allowed a wage no larger than the wage paid for the cheapest labor. In the case of the investor or speculator, increase in the value of farm land may be unearned increment. In the case of the farmer it is earned increment.

Farmer Feels Responsibility to Public.

The farmer must carry also those risks, due to changes in business, both at home and abroad, which influence the demand for farm products; that is, his prices are influenced by the ups and downs of business over which he has no control. In periods of disturbance, which interrupt foreign trade or interfere with home industries and thereby decrease demand for farm crops, the farmer suffers through the

reduction of his wage by decreased prices for his crops. When such periods come at a time when the cost of production is unusually high, and especially if one bad year has followed another and thus finds the farmer heavily in debt because of the losses of the previous year, the result is serious and makes trouble for the farmer and everyone else. But

the farmer always works. He always produces. He grows food in abundance.

The crops of the year 1920 were produced at the greatest costs ever known. These costs were justified by prices which prevailed at planting time. They

were incurred willingly because the farmers had been told over and over again that overseas there was a hungry world wait-

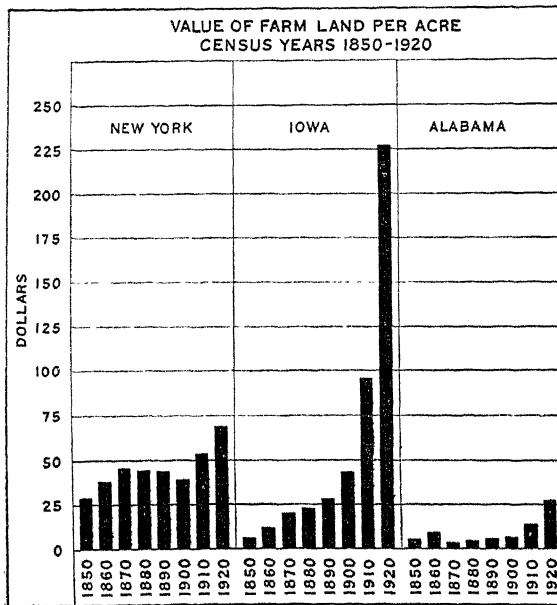


FIG. 2.—The average value of farm land (including buildings) in the United States increased between 1850 and 1920 at a rate equivalent to compound interest on the 1850 valuation of 2.65 per cent. The increase from 1900 to 1920 was at the rate of 6.47 per cent. For New York the annual rate of increase in value was 1.25 per cent for the period 1850–1920, and 2.87 per cent for the period 1900–1920; for Iowa 5.31 and 8.64 per cent, respectively, and for Alabama 2.40 and 7.52 per cent. Since 1920 land has declined in value in most parts of the United States, and this large contribution to the farmer's wealth from appreciation in land values can not be expected to continue.

ing to be fed and that there would be a strong demand for all they could produce. The production was large; the farmers worked very hard, and climatic conditions favored good crops. But before the crops were harvested prices had so decreased that at market time the crops sold for far less than the cost of production, considering the country

as a whole. Hundreds of thousands produced at heavy financial loss.

Disproportionate Reduction in Farmers' Income.

The farmers had taken it for granted that war prices could not continue. They had expected lower prices for their own products. They had not thought that their prices would drop as low as they did, but during the winter they accepted these very low prices with their usual philosophy. They borrowed more money to keep themselves going, and in the face of a continuing decline in prices of almost all of their

INCREASING EFFICIENCY OF THE AMERICAN FARMER

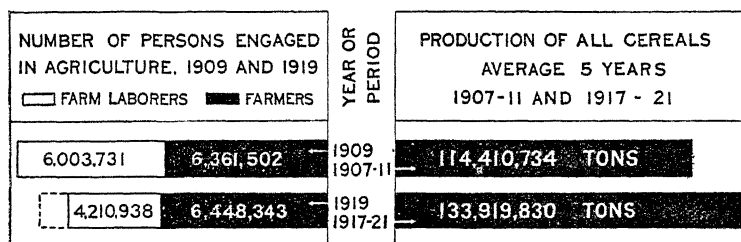


FIG. 3.—The number of persons engaged in agriculture decreased from 12,386,000 in 1910 to 10,659,000 in 1920, according to the Census of Occupations; but this decrease occurred wholly in the number of farm laborers, and is accounted for, in part, by the change in date of enumeration from April 15 to January 1. A real decrease, somewhat smaller than that indicated by the census, probably has occurred, however, in the number of farm laborers. But assuming that the number of persons engaged in agriculture was the same in 1920 as in 1910, there was an increase in production of the cereals per person engaged in agriculture of 17 per cent during the decade. This increase in efficiency was achieved by using more machinery, fertilizer, and other forms of capital; in other words, through bigger farms and better farming.

crops they put out ample acreage in the spring of 1921. At that time prices of farm products were much below the cost of production and far lower relatively than the prices of other commodities. The farmers' wages had thus been reduced to about the prewar level, but the wages of other people, whether paid direct or through the products of their work, remained very near the war level and from 50 to 100 per cent or more above the prewar level. This was a disturbing condition, but the farmer hoped and had a right to expect that by the time his crops of this year were ready for market other workers and other manufacturers, for the farmer is both, would be willing to accept their share of the

burden of economic rebuilding and that the prices of other things, including wages, which have the greatest influence on such prices, would come down to a fairer and more nearly normal relation to the price of farm products. There was no attempt on the part of the farmers to restrict production. In some cases, as with the cotton farmers of the South, there was an effort to readjust acreage by substituting one crop for another. But it can not be said that the farmers of the United States combined to hold up their wages. They showed their good faith and their sense of responsibility in trying times by planting plentifully, reducing their own expenses in every possible way, and working harder and longer hours. As in war time, many women and girls worked in the fields because reduced income made impossible the employment of other help. As the result of large acreage, very hard work, and a favorable season, the crops of 1921, while not as large as in some years, yielded more than we need for our own use, but prices are most unsatisfactory. Accompanying this report is a table showing the acreage and yields in detail.

Surplus Needed by Hungry Peoples.

Had some way been found for the people in need to buy our surplus at prices which would cover the cost of production the American farmer would have been prosperous and the country would have prospered with him. It is a terrible indictment of modern civilization that with such abundance here there are millions of people overseas suffering for the bare necessities and other millions starving to death. And surely we are sadly lacking in our understanding of economic laws or in our adjustment to them when the production of bounteous crops grown by the hard labor of 12,000,000 farmers and farm workers and their families is permitted to play such a large part in paralyzing our industries and business at home. For that is what has happened. The purchasing power of the principal farm crops of the year 1921 at the present time is lower than ever before known. In times past some of these crops have sold at lower prices per sale unit expressed in dollars and cents, but probably never before have our farmers generally been compelled to exchange their crops per sale unit for such small amounts

of the things they need. The purchasing power of our major grain crops is little more than half what it was on an average for the five prewar years of 1910-1914, inclusive.

When we remember that approximately 40 per cent of all our people live in the open country and are dependent upon what grows out of the soil, the baneful effect upon the Nation of reducing the purchasing power of that 40 per cent so far below normal is obvious. The farmer is compelled to practice the most rigid economy, to wear his old clothes, to repair his old machinery, to refrain from purchasing everything he can possibly do without, and to deny himself and his family not alone luxuries but many of the ordinary comforts of life. This in turn has forced the manufacturer to restrict his output to the lessened demand, reducing his own purchases of raw material, and greatly reducing the number of his workmen. Men out of work must live on their savings and are in turn compelled to practice economy by reducing their own buying, and thus still further restrict the farmers' market. And so we find ourselves in a vicious circle which we are having difficulty in breaking through.

Effect of High Freight Rates.

Nor is the foregoing a complete tale of the difficulties and discouragements of the farmer. The cost of getting farm

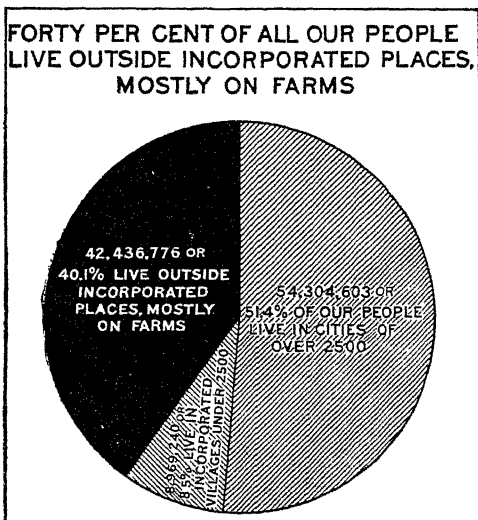


FIG. 4.—Forty per cent of our people live outside incorporated places, practically all in the open country. Over 8 per cent more live in villages of less than 2,500 population, mostly retired farmers or tradesmen who are dependent upon the farmers for support. Nearly half of our population is agricultural or directly dependent upon agriculture.

products from the farm to the consumer's table has increased tremendously during the past three years. The freight charge is very nearly doubled, and in some cases more than doubled. When wheat was selling at \$2.50 per bushel, corn at \$1.75, cattle and hogs at \$16 to \$22 per hundred, cotton

DIVISION BETWEEN THE FARMERS, THE ELEVATORS, and THE RAILROADS OF THE PROCEEDS OF A CARLOAD OF CORN SHIPPED FROM SIOUX CITY, IOWA, TO CHICAGO

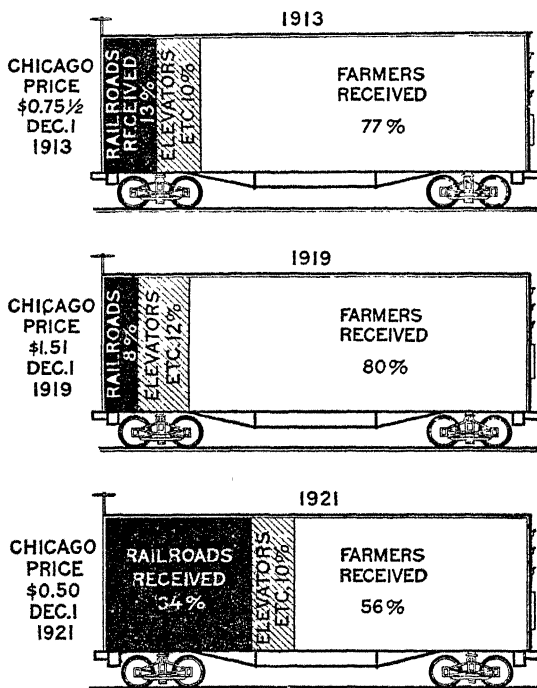


FIG. 5.—Sioux City is only 500 miles from Chicago, yet the price of corn was so low in the autumn of 1921, and the freight rate so high, that the farmer in northwestern Iowa who shipped corn to Chicago received only a little over half the Chicago price. The elevator charges include commissions and other items—practically the entire spread between the farmer at the local elevator and the purchaser on the Chicago market.

poses a burden grievous to be borne. When farm prices are ruinously low any addition to the freight charge means added distress. At the present time the cost of getting some farm products to market is greater than the amount the farmer himself receives in net return. And the heaviest freight

at 30 cents per pound, the increased freight rate was not a serious matter. It amounted to but few cents relatively and was a small item in the total price. But with wheat at \$1, corn at 48 cents, cattle and hogs at \$7 to \$10 per hundred, cotton at 17 to 20 cents (all these being primary market prices, not farm prices), the addition of even 10 cents per bushel or per hundred pounds im-

burden naturally falls on those farmers who live in our great surplus-producing States.

Not only do the very large advances in freight rates impose a heavy burden on the producers of grain and live stock, cotton, and wool, but on the growers of fruits and vegetables as well. Indeed, some of the latter have been compelled to see their products waste in the fields because the prices offered at the consuming markets were not large enough to pay the cost of packing and transportation.

This transportation matter is one of vital importance to agriculture. The country has been developed on the low long haul. Land values, crops, and farming practices in general have been adjusted to this development. Large advances in freight rates, therefore, while bearable in a time of high prices, if continued are bound to involve a remaking of our agricultural map. The simple process of marking up the transportation cost a few cents per hundred pounds has the same effect on a surplus-producing State as picking it up and setting it down 100 to 300 miles farther from market. Agriculture is depressed until the rates are lowered or until population and industry shift to meet this new condition. Any marked change in long-established freight rates, therefore, means a rearrangement of production in many sections and for a time at least favors some areas at the expense of others.

Freight Rates and Foreign Competition.

More than this, inasmuch as our heavy consuming population is massed so largely near the eastern coast and our surplus is produced long distances in the interior, substantial advances in transportation costs have the effect of imposing a differential against our own producers in favor of their competitors in foreign lands, especially to the south of us, who have the benefit of cheap water transportation, and who, in many cases, can lay down their products on our eastern coast more cheaply than our own people can ship their products to the same points by rail.

Rail transportation is essential to our agricultural production. Good rail service is of tremendous importance. Our farmers realize that our railroads can not be maintained

and operated efficiently unless permitted to charge rates which will cover all fair operating costs, maintain their roadbeds and equipment, and pay a fair rate on the money invested. No one has a greater interest than the farmer in efficient transportation. At the same time the economic aspects of material changes in railroad rates must be considered more carefully than in the past. If these changes are made without due consideration of their effect on agricultural production, inevitably they will create profound disturbance and impose great injustice.

With the increased charge for transportation have come increased handling charges all along the line from the farm to the market. Including freight, it now costs the grain and live-stock producer just about twice as much to get his products to the primary market and sell them there as it cost him before the war. At the same time the prices paid at these primary markets are lower than they were before the war, and in the case of corn, our largest grain crop, the price at Chicago is lower than the average price at this time for the past 15 years, while on the farms in the heaviest producing States the prices are lower than for 25 years.

Land Prices and Rents.

The four years 1916-1919, inclusive, were prosperous for farmers in general. Prices of grain, live stock, cotton, and wool were relatively high, and thrifty farmers got money ahead. These higher prices caused a large advance in the price of farm land. Not all of this was due to farmer buying. The shrewd trader and speculator scented some easy profits and bought to sell again. Also promoters of easy business virtue deliberately set snares for unwary purchasers and induced them to go overheavily in debt for land bought at prices which included unfair profits. Many young farmers who had saved several thousand dollars during the prosperous years were induced to buy farms on contract at the price peak, making small payments down, with provision for yearly payments of interest and on the principal on pain of forfeiture of all sums previously paid. The sadly unprofitable year of 1920 wiped out thousands of these fine young men, and the even worse year of 1921 will finish more of them.

During the prosperous years land rents went up rapidly, doubling and trebling, and in some cases going even higher. It was human nature that renters should prefer to pay cash rent in a time of good farming profits. The drop in prices for crops in 1920 caused many of these renters to lose not only their labor for that year but their savings as well. But for the leniency of their landlords thousands upon thousands of other renters would have lost everything they had.

Difficulties of Producers a Matter of National Concern.

The cynical or thoughtless man is disposed to say: "What have I to do with all of this? Those unfortunate purchasers and renters exercised bad business judgment. They took their chance and lost. They are simply victims of business misfortune. The same sort of thing will happen to me if I show no better judgment. Of course, I am sorry to see them lose, but really it is no affair of mine."

Nevertheless it is a matter of concern to the Nation at large and it is the affair of every good citizen when any considerable number of hard-working men get into financial difficulties so serious that their ability to produce is impaired. And surely it is a matter of concern to the community at large when the food producers of the Nation so generally find themselves in a condition not only financially unprofitable but which threatens continued production.

The unprofitable year of 1920 compelled large numbers of farmers to borrow heavily to meet excessive costs of production, which could not be paid for out of crop proceeds. Interest rates were high, and through our ill-adapted system of credit for farmers' needs, particularly in such times, most of these loans had to be renewed every 90 days. The unprecedented drop in prices of farm products in 1920 came as a stunning surprise to the majority of farmers. They had expected some decline, but nothing so severe as what actually happened. Consequently for a time they tried to avoid heavy sacrifice and continued their borrowings. Their bankers shared their belief that the situation would adjust itself and were willing to lend, but prices went lower, and these loans, together with loans previously made, soon added volume to that mass of frozen credit, of which we have heard so much talk during the past year.

Continued Production Depends on Fair Prices.

So we find that, speaking generally, the economic conditions which affect agriculture are in a bad state, with ruinously low prices for grains, with farmers laboring under heavy financial burdens, and with their difficulties having been communicated to practically every other line of industry, commerce, and general business.

In setting forth this situation so candidly, my thought is not to add to the discouragement but rather frankly to bring

THE SLUMP IN PRICES OF TEN LEADING FARM CROPS
WEIGHTED AVERAGE, JAN. 1920 TO FEB. 1922
AVERAGE 1913 PRICE EQUALS 100

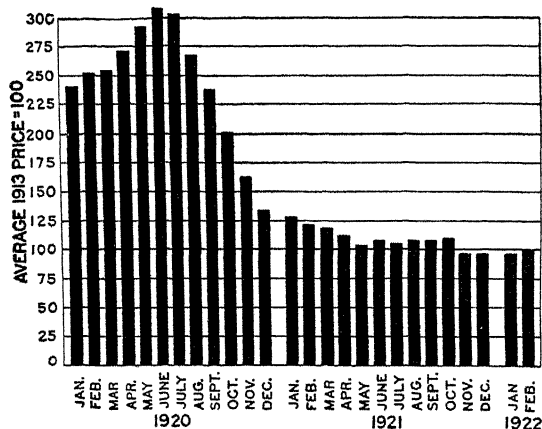


FIG. 6.—During the latter half of 1920 the average price in the United States of the 10 leading crops dropped 57 per cent, and by May, 1921, was only one-third that of the preceding June. In November, 1921, this average price passed below the 1913 level. The magnitude of this decline in price varied with the different crops and in different regions. In Iowa, for instance, the farm price of corn in the autumn of 1921 was only half that in 1913 and one-fourth that in 1919.

any length of time on a basis which does not give the producer a fair price. If conditions continue under which workmen in other callings, whether laboring men, skilled workmen, manufacturers, or business men generally, receive pay which is so very much higher than the farmer receives, there will be a steady drift from the farm to industries and business, thus increasing the number of consumers and decreasing the number of producers, and this will result in prices for farm products so high that conditions will be re-

the situation with all its difficulties clearly into view. The condition must be recognized exactly as it is if it is to be alleviated. Ignorant optimism is just as harmful as doleful pessimism. We must accept the cold fact that agricultural production in adequate measure can not be continued

versed and the burden will be transferred to the people in the cities. It is not to the advantage of the Nation that any large group of our people be placed at an economic disadvantage.

Fortunately, there is a brighter side to the picture I have presented. Prices for live stock are much higher relatively than prices for grains. In the case of corn, for example, which is our largest grain crop, the farmer is receiving very much more for this grain when fed to hogs and cattle and sheep and marketed in that form than he is receiving for his corn when marketed as corn. Speaking generally, about 80 per cent of our corn crop is fed to live stock, and those farmers who have maintained their live-stock production are not suffering so severely as might be indicated by the price of grains. The prices of dairy products also are higher relatively than the prices of grains and feeds, and in those sections where dairying is practiced there is a steady income and the farmers are getting along.

The cotton crop of 1920 was large, and when the foreign outlet was so restricted prices dropped far below the cost of production. The situation was so serious throughout the cotton States that the bankers, merchants, and business men generally joined with the farmers to bring about a reduction in the acreage in 1921. This effort was successful, and the acreage was reduced about 28 per cent. The crop was still further shortened by the ravages of the boll weevil, so that the final figures will indicate a reduction of nearly 50 per cent below last year's production. When this situation became known there was a rapid advance in the price of cotton. The price doubled within a period of a few weeks. The effect was beneficial not only to the cotton planters and others who held old cotton, but to all business interests in the South, and reports from that section have been much more hopeful during the past two months.

Constructive Legislation by Congress.

The marked decline in the prices of farm crops during the fall of 1920 was noted with some satisfaction by the consuming public. Although prices of farm products on an average had not increased as much as the prices of most other commodities and had not increased as much as wages in industry, nevertheless our people had been accustomed

to cheap food for so long that any increase in price, whether actual or relative, met with indignant protest. The drop in prices paid to the farmer, however, was not followed by a corresponding drop in the prices which the consumer paid for his foodstuffs, and before the summer was well advanced the thinking business public began to see that the severe drop in the prices the farmer received was having a very bad effect upon business and industry in general and that such a marked reduction in the purchasing power of the farmer might result disastrously. When Congress met in April, 1921, the danger to our agriculture was in the minds of Senators and Representatives, especially those from the agricultural States, who had first-hand knowledge of the situation, and there was an earnest casting about for measures of relief. Many bills were introduced in the hope of helping the farmer. Members of the staff of the Department of Agriculture were called into council on these measures.

Much time was given to the preparation and submission of statistical matter and other information asked for by legislators. It became evident that there were no short cuts by which an immediate return to agricultural prosperity could be insured, but some laws were enacted which already have had a helpful influence. Most of these were directed toward making credit more easily available for worthy borrowers. The joint-stock land banks were helped back into business by the measure which authorized them to increase the interest rate on their bonds issued based on farm loans. The power of the War Finance Corporation was greatly extended, making large sums available for agricultural needs. The machinery for getting out these loans is now working well and most helpfully in the surplus-producing States. Provision was made for increasing the capital of the Federal farm land banks, thus enabling them to extend their farm-mortgage loans, and the better demand for bonds based on these loans is making rapid extension possible. An act was passed bringing the packers and market agencies under Government supervision, and another act extending Government supervision over grain exchanges. Never in the same length of time did Congress give more serious attention to farm needs.

All of this legislation is of a constructive character and will be more helpful than is now realized. Concerning the efforts to make easier credit conditions, there is this to be remembered: Better prices for the crops the farmers have to sell and lower prices for the things they have to buy are far more needed than an opportunity to go further in debt. Easier credit will be helpful mainly in enabling the farmer to tide over this period of severe stress without being compelled to sacrifice his live stock and crops and without losing his farm. Money made available through the new facilities provided by legislation should be used mainly for carrying loans on which payment is demanded and for buying live stock to consume the surplus crops. If loan companies and insurance companies which hold farm mortgages will freely grant extensions of payment of both principal and interest, that will help conditions very much, and they can do this without danger of loss.

As is always the case in such periods of depression, many well-meaning men come forward with ill-considered measures. Visionary schemes of all kinds are presented. Some would have the Government take charge of the larger business enterprises; others would have the Government undertake to fix prices either arbitrarily or indirectly by buying up surplus crops. The experience of 3,000 years shows the impracticability of such efforts.

Much is to be hoped for from the agricultural inquiry which has been under way since midsummer by a joint committee of the Senate and House. The department has aided this committee in every way possible, and especially by preparing a great mass of statistics bearing on the economics of agriculture. The result of the committee's studies should be very helpful in enabling us to plan wisely in the future.

Must Consider Economics of Agriculture.

In addition to contributing what it could of helpfulness to Congress and to other agencies seeking means of relieving the uncomfortable situation, the department has been working earnestly in its own field. Agents have been sent to Europe to study conditions there in the hope of finding ways to enlarge our exports of farm products. We have not met with large success in this direction because of eco-

economic conditions abroad. Continued inflation overseas and drastic deflation at home put us at a decided disadvantage in selling our products. However, much exceedingly helpful information has been gained, which, while not promising the full measure of immediate relief we would like, will help us to plan more wisely and to adjust our production more perfectly to the foreign demand. The effect upon our agriculture of economic and financial policies put in force by nations which import foodstuffs has not had the attention in this country which the matter merits.

Had we in the past given as much attention to the economics of agriculture as we have to stimulating production, it is not too much to say that at least some of the troubles which now beset us might have been anticipated and avoided. Firmly convinced of this, one of my first acts upon taking office was to inquire into the economic work being carried on in the department. I found this mostly in two bureaus and one office of bureau standing. Last winter Congress provided in the agricultural appropriation act for the consolidation of the Bureau of Crop Estimates and the Bureau of Markets. In considering this consolidation I found that to secure the greatest efficiency in our study of economic problems it would be wise to include in this merger the Office of Farm Management and Farm Economics as well. To make sure that nothing might be done without due thought, I appointed an economic council, consisting of five bureau heads, and asked them to consider the economic work of the department and make their recommendations. After much study and investigation this economic council prepared a report. Several highly qualified men from different parts of the country were then asked to come to Washington and go over the plans submitted. They did this and approved the plans, which contemplate the consolidation of the Bureau of Crop Estimates, the Bureau of Markets, and the Office of Farm Management and Farm Economics and the rearranging of the work of these three bureaus under appropriate divisions. Not having authority to formally complete such consolidation, I consulted with various members of the agricultural committees of the Senate and House, and upon receiving their approval ordered that the work be so arranged as to virtually effect the consolidation. In the esti-

mates for the next fiscal year I have asked legal authorization to complete it.

New Bureau to Meet Needs.

I have suggested that the name of this new bureau should be the Bureau of Agricultural Economics. It is proposed to merge into this one bureau all the forces of the department which are engaged in agricultural economic work. The purpose is to inquire into every economic condition and force which has an influence upon either production or price, for the one depends upon the other. We shall begin with the study of farm management, types of farming, cost factors, market grades, and practices as they bear on farm management. The cost of production and distribution will be studied at each stage along the way. Investigations will be made in land economics with a view to encouraging a wholesome system of land tenure, land resources and utilization, land settlement and colonization; the marketing of farm products with a view to better organizing distribution, market conditions, standardization, and grading of products; collection of statistics of production and distribution; crop and live-stock production both in the United States and in foreign lands; prices of farm manufactured products; historical and geographical studies in production and distribution with a view to interpreting the trend of agricultural prices and production, the development or decline of markets, and generally the geography of the world's agriculture; methods of finance; insurance of buildings, live stock, and stocks in storage; taxation and its relation to production and distribution; the financing of rural public utilities and other group enterprises; agricultural conditions in countries which compete with the United States; the characteristics and changes in rural home life and its relation to agriculture; the trend of agriculture and population; in short, everything which may be helpful to the farmer in producing with judgment. Such studies and investigations will be just as helpful to the consumers as to the producers, for the ultimate purpose is to make sure that our people are abundantly supplied with the products of the soil at prices which will both sustain our agriculture and be just to the consumer.

Much of the work outlined above already has been under way in the department, some of it for many years, but I am sure that this bringing together in one bureau of the major economic projects of the department will both reduce expense and make possible the better working out of these projects.

The organic law which created the department back in the sixties contemplated exactly this sort of development. By it the department was charged with the duty of acquiring and diffusing "information on subjects connected with agriculture in the most general and comprehensive sense of that word." The thought that the sole duty of the farmer is to produce and, having produced, take his crops to the nearest market, sell them for what he can get, and then go home and produce some more, is no longer entertained by well-informed men. It is now generally recognized that the farmer has a very direct and personal interest in the efficiency with which his crops are handled until they reach the consumer's table. The production of food has long been considered as a sacred obligation, but it is an obligation not in any sense more binding than the obligation to get that food to the consumer with the least possible waste and at the least possible cost. Nor is the obligation to produce more binding than the obligation to produce intelligently with due regard to the needs of consumption. It is just as important that the producer know what to produce and how best to get it to the consumer as it is to know how to produce at all.

Marketing Is Part of Production.

Marketing is as truly a part of production as is the growing of the crops, for the crops have no value unless they can be put into the hands of those who need them. The assembling, storing, and distributing of farm products are productive enterprises and those engaged in this work require much the same economic and technical information as that required by farmers. The acquiring and disseminating of knowledge of what to produce and how best to market it is as much needed as the knowledge of how to produce, whether the matter is viewed from the standpoint of the farmer, the middleman, or the consumer, for orderly and stabilized pro-

duction means prices which are neither very much too high nor very much too low and guarantee an abundance of food at all times. Such knowledge can not be gained from a study of the mechanics of marketing alone. It is much more than a business matter. It involves research in agronomic, biological, and physical, as well as statistical and economic science by men trained in their respective lines and who have a working knowledge of agricultural processes and conditions.

Agricultural Research Involved in Marketing.

To learn what it is wise to produce involves study of the varieties, qualities, and quantities demanded by the market. In the case of fruit, as an illustration, this requires the selection or the breeding of suitable varieties by the horticulturist; a study of life processes by the plant physiologist; the study of liability to attack by bacteria and fungi by the plant pathologist. Thus it may involve cooperation of horticulturists in breeding suitable varieties with physiologists in the study of their behavior and with plant pathologists in the study of their liability to disease. All these are factors in the bringing to market of a large variety of agricultural products.

Practically all agricultural products are more or less perishable and good marketing involves more than mere salesmanship, more than a mere determination of the public taste, the public demand, and the probable supply. Only through the carrying out of investigations in marketing of the type above described, in which horticulturists, plant physiologists, plant pathologists, chemists, refrigeration experts, and statisticians have cooperated, has it been possible to give to American agriculture that distinctive character which makes it possible to produce perishable products on one edge of the continent and to market them without serious deterioration upon the other.

A very good illustration of the way in which the various forces of the Department of Agriculture are mobilized and used to successfully create a great new industry is found in the story of the Washington navel orange. Back in 1870 the department first brought this variety to the United States from Brazil. The introduction consisted of 12 newly

budded trees. These were planted in the department greenhouse in Washington. One of the original trees is still growing there. The first two young plants propagated from these were sent to Mrs. L. C. Tibbets, Riverside, Calif., in 1873. When these trees came into bearing the high value

DEVELOPMENT OF NAVEL ORANGE INDUSTRY

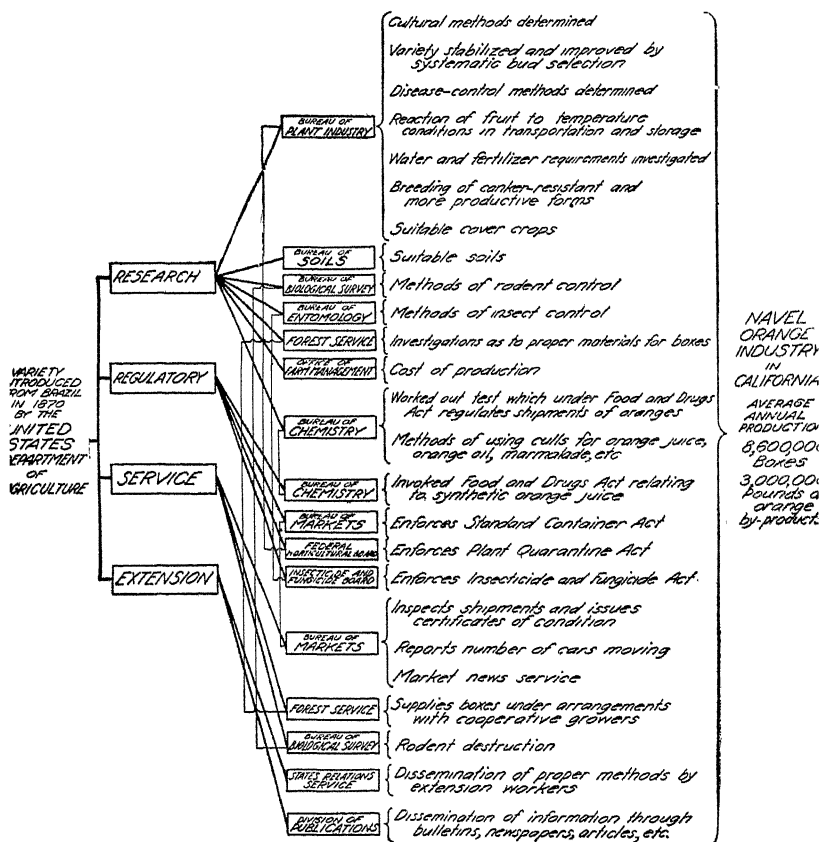


FIG. 7.—A great industry largely due to team work in the Department of Agriculture.

of the variety was promptly recognized, and then began its development for market. The accompanying chart shows in graphic form how the services of the scientists of the different bureaus of the department were utilized to establish this new industry, from which there is now an average

pounds of orange by-products. This is but one of many stories which could be told of the service the department is rendering to the Nation.

Studies in Grain Marketing.

In the marketing of grain, investigations are necessary on the milling and baking qualities of wheat and other grains for the purpose of determining the relation or intrinsic values of such factors as test weight per bushel, gluten content, color, texture, general appearance, different forms of damage and mixtures of various impurities, and treatment to which grain is subjected in handling.

All this is necessary in order not merely that grain may be properly graded but also that the most suitable kinds of grain may be bred, introduced, and grown. This work has the profoundest effect on farm operations.

The cereal breeders in the department, particularly those engaged in the breeding of wheat, work with those engaged in the studies of grain markets and standards. In order that a new variety may be readily acceptable to the farmer and to the grain trade it must be determined before it is distributed that it meets the demand of the market. Otherwise it would be no advantage but an actual detriment to introduce a new variety of wheat which yields more than the variety a farmer is now growing but which has a poorer milling quality, so that he would receive a lower price for it on the market. Therefore, the plant breeder and the market specialist must work together to see that only those varieties are distributed which are at least as good as the varieties now generally grown.

All along the line there needs to be the closest cooperation between department scientists who are familiar with varietal adaptation and the rapid changes taking place in the varieties grown by farmers and those who have to do with marketing and particularly those concerned in formulating and administering grain standards. The rapid increase in the growth of red durum wheat made it necessary to introduce new standards for that class of wheat.

Diseases play an important part in determining the market grade and value of cereals. The presence of smut in any considerable quantity is always noted in grading wheat

and the price materially reduced because of it. The shriveling of wheat caused by rust and the presence of moldy and rotten ears and spoiled kernels in corn, due to corn rots and other diseases, materially affect the grade and market value of those grains. Therefore the work of research specialists, either in developing methods of controlling the disease or in producing resistant varieties, is of importance not only to farmers but to the grain trade and to consumers. It is necessary that the biological research workers be closely in touch with those who are studying grain marketing and grain standards, so that the latter may be advised of outbreaks of new diseases or the occurrence of extensive epidemics of diseases already well known.

Crop rotation and farm management affect the presence of mixtures of other grains and of weed seeds and are therefore important factors in determining the grade of grain sold by farmers. Practically every phase of research has its bearing upon marketing and benefits both producer and consumer.

Land Utilization Study.

Considering the future, the need of basic research in agricultural economics becomes even more manifest. We produce more foodstuffs than our own population can consume, and under present conditions we are suffering because of the lessened foreign demand which leaves it on our hands. This, of course, will not continue. The world will weather this period of reconstruction and trade back and forth will be restored. Our own population is increasing rapidly, and within a very few years home needs will require most of what we grow. We can not increase our land area. We now have under the plow practically all the land that is easily available for cultural purposes. We can add to our productive areas by reclaiming wet land, by clearing cut-over land, and by irrigating dry land. These additions must be made at considerable expense and can be made wisely only after thorough study of the character of the land, its location as to markets, and its adaptability to produce what the market needs.

I have assigned to a committee of highly competent men from the several bureaus of the department the task of mak-

ing a survey of our land area which is not now being utilized for the production of crops. They will study the dry lands,

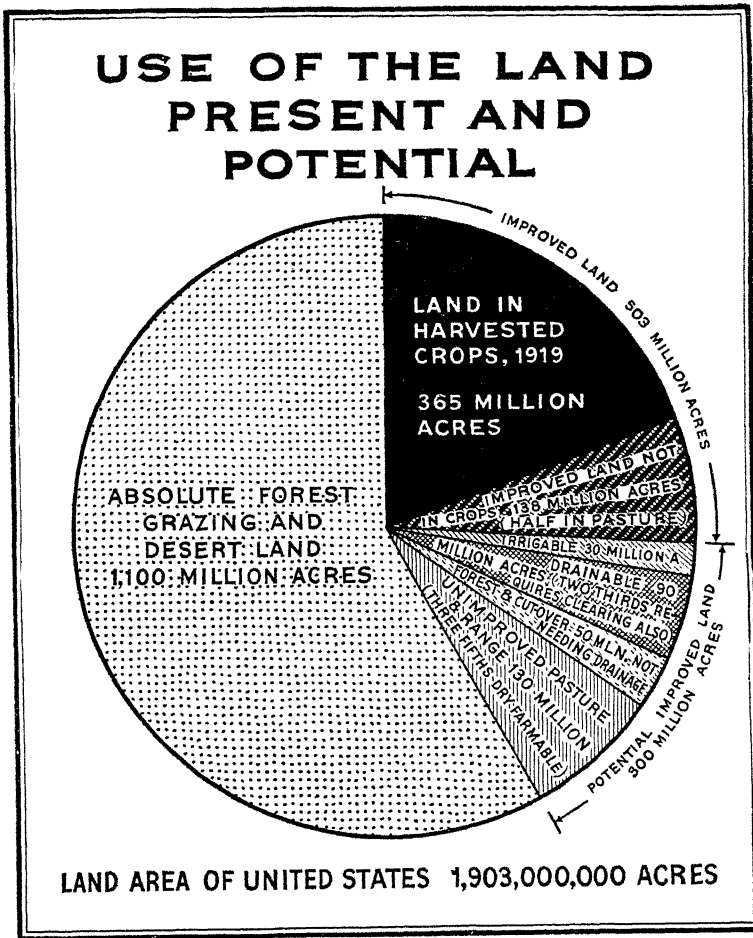


FIG. 8.—Improved land in farms amounted to 503 million acres, according to the census of 1920, of which about 365 million acres were in crops, and probably 70 million acres in rotation and other improved pasture. There are about 300 million acres more which it is possible to use for crops when the price of farm products justifies the cost of irrigation, drainage, clearing, or other means of reclamation. This cost is increasing as the more feasible projects are developed, and demands careful study with reference to the probable price of agricultural products and the Nation's needs.

the wet lands, and the cut-over timberlands, especially with a view to determining how such lands can best be used to increase agricultural production as needed. We must have

reliable information concerning these lands if we are to develop a wise agricultural policy.

The largest increase in production, however, must come not from the addition of new land but from increased yields on the land now under the plow. This means a tightening up of production methods. Increased production ordinarily increases cost and our efforts should be, therefore, to cheapen production as well as marketing costs. We will be driven to this by increasing competition from foreign farmers in countries where fertile land is still very cheap and where the standards of rural life are not as high as we demand for our own people. Until very recent years this foreign competition was not a serious matter. Our own land was relatively cheap, and our farmers are the best in the world, measured by the standard of production per man. Now, however, with land at prevailing prices our farming in the future must be conducted on much more business-like lines and in such a way as to return a fair income one year with another. Deferred income resulting from large and rapid increase in farm land values is very nearly a thing of the past.

Without lessening in any way our efforts to produce more cheaply and better, we must give the most painstaking attention to studies of what we may call the business side of farming, such as have been mentioned in discussing the proposed Bureau of Agricultural Economics. Our steadfast purpose should be to maintain the agricultural basis of this Nation, to maintain and advance our relatively high standards of rural life, and to conserve the fertility of our soil through a well-balanced system of agriculture. Under a carefully thought out agricultural policy embracing these essentials there need be no question of our ability to feed our people abundantly and at reasonable cost.

Organization of the Department.

Turning now to the general work of the department, it is organized by bureaus, scientific and administrative. A hasty glance at this organization might give the impression that these various bureaus are to some extent unrelated in their organization and work. Quite the contrary is true. The activities of each bureau are not limited to the apparent boundaries of that bureau but are extended to aid other

bureaus. Some reference already has been made to this in what has been said on the subject of marketing. The solution of the varied problems affecting agriculture requires the combined efforts of men in many scientific fields.

The functions of the department are carried on in four general fields of endeavor—research, extension, regulation or supervision, and service. These fields, while distinct in themselves, nevertheless imperceptibly merge into one another and the workers pass back and forth as needed, just as the farmers of a community change work with one another or come together to perform a task too large for the individual.

Research the Basic Work of the Department.

Naturally, the basic work of the department is in the field of research. Upon the results of this work its other activities are built. For the first 40 years its chief business was in this field. A staff of scientific specialists was built up who made studies of the soil, of plant cultural methods, of the breeding and feeding of animals, of plant and animal diseases—of everything which had to do with crop and live stock production. It is this scientific research which contributes the material that little by little is crystallized into agricultural progress. Through this work of the department, in cooperation with the various State experiment stations, the Nation is richer by thousands of new varieties of plants introduced from other lands or created by scientific breeding. Plants have been discovered which are better adapted to our colder climates, our arid regions, our higher

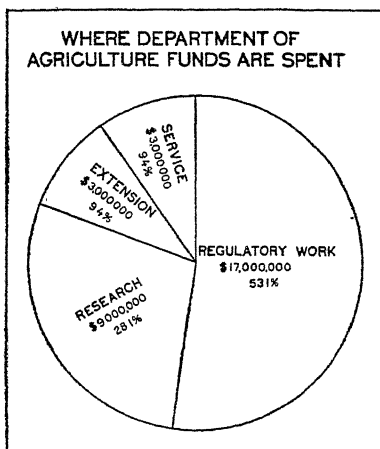


FIG. 9.—The functions of the department are carried on in four general fields of endeavor—research, extension, regulation or supervision, and service. It should be pointed out that over half the funds for service and regulatory work were expended in the performance of the primary functions of government rather than for the direct development of agriculture.

altitudes; disease-resistant strains and drought-resistant varieties have been developed; methods of control of diseases of plants and animals have been discovered; the science of bacteriology and animal pathology has been created; and a protecting and ever-vigilant army has been organized around the sources of our food supply.

To try to tell the story of the year's work in research would be a hopeless effort in a report of this kind. It will be found in detail in the numerous scientific publications and bulletins printed by the department and in the reports

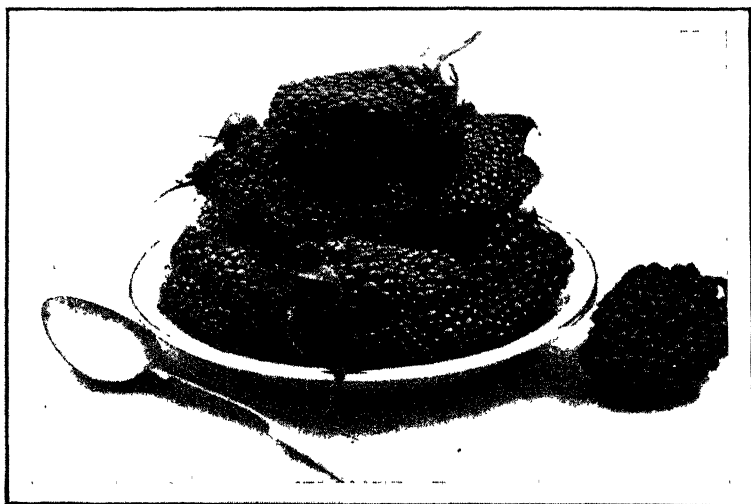


FIG. 10.—The Colombian berry, a promising new fruit, introduced in 1921, which comes from an elevation of 10,000 feet in the Andes Mountains of Colombia. It is probably the largest berry yet discovered. The fruit resembles the loganberry, but is much larger, single specimens sometimes measuring $2\frac{1}{2}$ inches in length by $1\frac{1}{2}$ inches in thickness.

of the bureau chiefs. At the present time research work is being carried on in some 2,500 different lines of investigation, in some by one bureau alone, in others by the cooperation of several bureaus.

Among the more important of these investigations a very few may be mentioned:

Development of a new process for manufacturing phosphoric acid to eliminate the immense waste now suffered in mining phosphate and thus reduce the cost of fertilizers.

Development of a method for separating the microscopic colloidal particles in soils, which is expected to throw light

on such agricultural problems as cultivation of soils, the amount of water required by certain soils, their capacity for retaining plant foods, and their reaction to lime.

Development of better methods for fixing atmospheric nitrogen for use as fertilizer.

The soil survey has completed the mapping of soils over an area of 1,063,588 square miles, including 31,915 square miles in Alaska and 300 square miles in Porto Rico. The work covers approximately 950 counties and 50 reconnaissance areas.

Investigation of corn root, stalk, and ear rots to determine the causes and methods of preventing these obscure and widespread diseases.

Investigations of the effect of light, and more especially the length of the day, on plant development, furnishing explanations of phenomena in plant growth not heretofore understood and essential to accurate experimentation in the breeding of plants for economic purposes.

Development of methods of accurately measuring the productiveness and other important characteristics of perennial plants, such as fruit trees, through bud selection, which will make possible the replacement of undesirable trees with desirable types of the same variety.

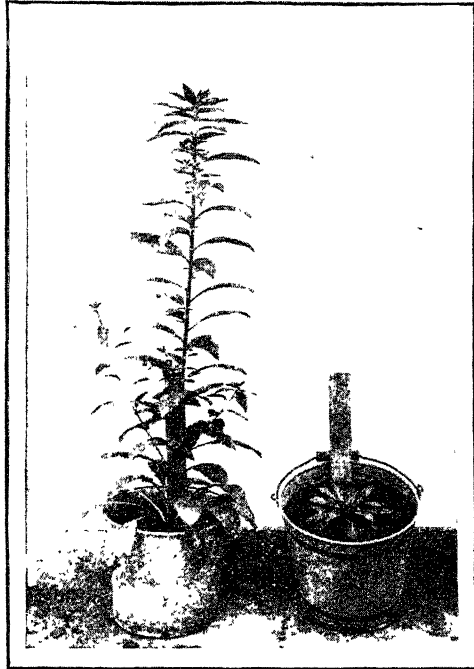


FIG. 11.—The seasonal length of day exercises a marked regulatory action on flowering and fruiting of plants. The Evening Primrose here shown remains in the rosette stage and is unable to flower under the relatively short days of late fall, winter, and early spring, but quickly responds to the long days of summer.

Experiments looking to improvement of the milking quality of beef cattle.

Practical completion of experiments which have resulted in the establishment of a breed of general-purpose fowls which lay white-shelled eggs.

Breeding experiments which will lead to the fixing of a type of American utility horse.

Studies to ascertain the cost of producing various farm crops and the cost of marketing them.

Studies to throw light on the whole marketing problem as a basis for the more efficient organization of the various marketing processes, whether the work is done by individuals or by groups of farmers.

Research to determine the composition of agricultural products in order to develop new uses for cull and surplus crops.

Basic research on the composition of foods and drugs in order to establish standards to prevent adulteration and to improve methods of manufacture.

Research to develop methods of chemical analysis for the use of chemists in agricultural colleges, experiment stations, universities, and those connected with Federal, State, and municipal food and drug departments.

The development of measures for the control of the European corn borer, the Japanese beetle, the pink bollworm of cotton, and other crop pests that have recently gained foothold in this country.

Researches to determine the characteristics of materials designed for highway construction.

Researches to determine improved methods of highway design to meet modern traffic conditions.

Studies of hydraulic problems, including the factors influencing run-off and flow of water in drainage canals.

Money Spent in Research Is National Investment.

It is impossible to estimate the value of this research work. The money spent for it is capital invested by the Nation in building a permanent agriculture. Its dividends come from increase in yields, decrease in cost of production and marketing, and better utilization of crops, all having for

their purpose the maintenance and increase of our food supply.

Last spring Congress very wisely authorized the appointment of a Director of Scientific Work. This will make it possible still further to coordinate the work of the various bureaus and also to bring the scientific work of the department into closer relation with the scientific work being carried on in the experiment stations of the different States, as well as to cooperate with various other agencies engaged in similar or related lines of investigation. Such cooperation should result in a well-rounded national program of research, a larger and better directed program than we have had in the past, and a much better utilization of both time and money.

In the carrying out of this policy there is need for the strengthening of the work of the State experiment stations by increased Federal appropriations. These stations are receiving about \$3 of State appropriation to \$1 contributed by the Federal Government, but even with this help they have not been anywhere near able to keep pace with the calls for information and investigation resulting from the rapid development of the extension service. As the researches of these stations and the Federal department are the sources from which the information to be carried by the extension service is derived, it is of the utmost importance that the research service be strengthened so as to adequately meet the demands for information. The Federal Government can well afford to be liberal in appropriating money to the State experiment stations to be used in research work planned in cooperation with the department.

As an aid to the research and other work the department maintains a library, which was increased during the year by the addition of 7,500 book and pamphlets. The collection now contains 160,000 books and pamphlets, a large number of which can not be found in any other library in the country.

Agricultural Education.

The importance of extending and improving agricultural instruction in schools is fully recognized by the department, and the Congress has for a number of years made provision

for investigations on this subject. The purpose is to make available to teachers and students the agricultural knowledge accumulated here and by the agricultural colleges and experiment stations. The department cooperates with the Federal Board for Vocational Education, as provided for in the Smith-Hughes Act, with the States in preparing courses of study in elementary agriculture for rural schools, and with teacher-training divisions and teachers in service.

In cooperation with the Federal Board there has been prepared a number of courses of study on agricultural subjects, especially for the use of teachers in vocational agricultural schools operating under the Smith-Hughes Act.

Through State cooperation two courses of study in elementary agriculture, based on a study of the agricultural practice in the respective States, were prepared during the past year, one for the rural schools of Arkansas and the other for the rural schools of North Carolina. Some special assistance was given the Department of Education in Ohio in the form of suggestive outlines for rural teachers.

Circulars suggesting how teachers may profitably use information contained in certain publications, particularly the Farmers' Bulletins of the Department of Agriculture, are prepared from time to time with the hope of improving methods of instruction in agriculture and related subjects. Five such circulars were prepared during the past year, dealing with such subjects as beautifying the homestead, better seed corn, cowpeas, forage for the cotton belt, and factors that make for successful farming in the South.

The schools are also aided by the loan of illustrative material, especially sets of lantern slides adapted to school use, and by the distribution of classified lists of publications of the Department of Agriculture, as well as lists of sources of materials valuable to teachers of agriculture.

In all this work it is recognized that the teaching of agriculture in a community should have a vital connection with the problems of the farms of that community. Pupils are interested in those things with which they come in contact, and it is believed that the type of agriculture practiced in the community can be used to the best advantage in teaching. Therefore the teacher is urged to organize the available subject matter which is of community interest and present it in

such a manner that it will touch closely the life and experiences of the pupils.

Home Economics.

While other branches of the Government study certain phases of food, clothing, and household equipment, the Department of Agriculture is the only one specifically concerned with investigations relating to the selection, preparation, and care of these commodities in the home. These are matters of importance to agriculture in two ways—first, because the final utilization of agricultural products is an essential part of the economics of agriculture, and, second, because the welfare of a farm family depends upon how wisely it uses the materials, money, and labor available for household needs.

The Department of Agriculture during the past year, as in previous years, continued to carry on investigations on food, clothing, and household equipment and management, with particular reference to assisting extension workers in improving conditions in the farm home. The constantly increasing number of requests received for reliable information on all such subjects proves the desire of American housekeepers to apply the results of scientific research to their household practices, just as farmers have come to demand a scientific basis for agricultural methods.

The department has found it impossible to meet all the legitimate demands for such information made upon it by extension workers, other branches of the Government, public and private institutions, teachers, and individuals, and has therefore found it necessary to confine its efforts to a limited number of the more pressing problems which it is especially well equipped to study, which seem most generally urgent, or regarding which there is the least available information.

Department Administers Many Laws.

The regulatory or supervision work consists of the administration of a large number of laws, such, for example, as the food and drugs act, which forbids the adulteration or misbranding of any article of food or drugs entering interstate commerce; the meat inspection act, which insures the wholesomeness of our meat; the protection of the national forests;

a number of quarantine acts dealing with live stock and with plants; the protection and commerce in game animals and migratory birds; the manufacture of serums and toxins; the insecticide act; the tea importation act; the enforcement of grain and cotton standards; the Federal warehouse law; the act prescribing standards of size of boxes and baskets used in the packing and selling of fruits, berries, and vegetables; the Federal road act; the packers and stockyards act; the future trading act. Through the administration of these and a number of other laws designed to protect our people from impure food and unfair weights and measures the department comes into very direct contact with the business and consuming public throughout the country. These laws are administered with a view to aiding legitimate industry and, at the same time, protecting the public from unfair practices on the part of those few whose business ethics are not as high as the public interest demands.

The administration of each law has been placed in the bureau that has to deal with the scientific and constructive work concerning the subjects affected by the law. Experience has shown that a law affecting commodities manufactured from a given agricultural raw material can be most constructively enforced by the organization that is familiar with the production and handling of that raw material. If the law is of such nature as to affect a range of commodities or subjects so wide as to go beyond the purview of a single bureau, it is administered by a board made up of specialists from the different bureaus having to do with the scientific investigation of the subjects involved. An example of the former kind is the meat-inspection law, which is a matter primarily for veterinarians. Examples of the latter are the plant quarantine act, which equally concerns plant physiologists, entomologists, and foresters; and the insecticide and fungicide act, which is of equal concern to plantsmen, animal husbandmen, and entomologists. But even those acts that come wholly within the purview of a single bureau require for their proper enforcement the cooperation of scientists in other fields of agricultural research. The enforcement of the food and drugs act, for instance, constantly calls for the cooperation of chemists, of botanists, of biological scientists in the fields of animal industry, and of various other specialists

who are employed by the department primarily to perform other duties but without whose aid the enforcement of the food and drugs act would become so wooden and autocratic as to become obnoxious alike to producer and consumer.

Regulatory Work Stimulates Research.

It has been found that the regulatory work strengthens the research work because in the regulatory work problems are discovered that are of the utmost importance to the welfare of the country and which can be turned over to the scientific research staff for solution. Thus, the regulatory work is a source of stimulus for the research staff. Some of the most valuable practical work that has been done by bureaus having laws to enforce has grown out of information gained in the regulatory work. If the bureaus had not had the regulatory work to deal with, the problems would not have come to the attention of the scientific staff.

There is still another class of regulatory work consisting of the administration of laws that are permissive rather than mandatory in nature. An example is the United States warehouse act. The duties growing out of such administration are perhaps more accurately described as service than as regulatory work, but they none the less act in the same stimulating manner upon the scientific work.

The department reported during the year to the Department of Justice 6,514 civil and criminal cases arising under the various regulatory statutes committed to its administration and enforcement. Notices of judgment were filed in 2,275 cases involving the adulteration and misbranding of foods, drugs, insecticides, and fungicides.

Packers and Stockyards Act.

During the past summer Congress added to the duties of the department by placing under it the enforcement of the packers and stockyards act and the future trading act. These laws give the supervising agency large powers.

In the case of the act first named the packers are prohibited from any unfair, unjustly discriminatory, or deceptive practices or devices; from giving undue preference; from apportioning the supply of any article with the effect of restricting commerce or creating a monopoly; from ma-

nipulating or controlling prices; from apportioning territory or purchases or sales. Commission merchants, persons furnishing stockyard services, and dealers at yards are required to establish, observe, and enforce just, reasonable, and nondiscriminatory rates. They are forbidden to charge other rates than those named in schedules which they are required to file for approval with the supervising agency, and the latter after hearing may determine and prescribe just and reasonable rates and make appropriate orders and enforce same. The act carries suitable penalties. The packers, stockyards, and market agencies may appeal to the courts if their rights are infringed.

Under the terms of this act it should be possible both to correct any unfair practices in the marketing of live stock and to make a constructive study of the business of marketing live stock and distributing meats.

The organization for the administration of this act is now being built up as an independent unit in the department. Great care is being taken to select men who have general knowledge of the live-stock industry and of marketing and packing, and who are level-headed, even-tempered men, free from prejudice.

Grain Exchange Supervision.

The future trading act imposes a prohibitive tax of 20 cents per bushel on future-trading exchange transactions known to the trade as "privileges," "bids," "offers," "puts and calls," "indemnities," or "ups and downs." It also provides for a tax of 20 cents per bushel upon grain sold for future delivery, except when the seller is the owner or the grower of the grain, or the owner or renter of land on which it was grown, or an association of such owners or growers, or owners or renters of land, or when such contracts are made by or through a member of a board of trade which has been designated by the Secretary of Agriculture as a contract market. It provides that all such contracts must be evidenced by a memorandum in writing containing essential information. The Secretary of Agriculture is authorized to designate boards of trade as contract markets under certain conditions set forth in detail in the law, which conditions provide for adequate Government super-

vision of such markets. The Secretary of Agriculture is authorized to make such investigations as he may deem necessary concerning operations of boards of trade and may make rules and regulations calling for the information necessary to make such investigations.

Under this act it should be possible to make a thorough study of the operation and effect of future trading in grains, and it is hoped that after a time this information may make it possible to do away with unfair manipulation in prices of grains, if such is found to exist.

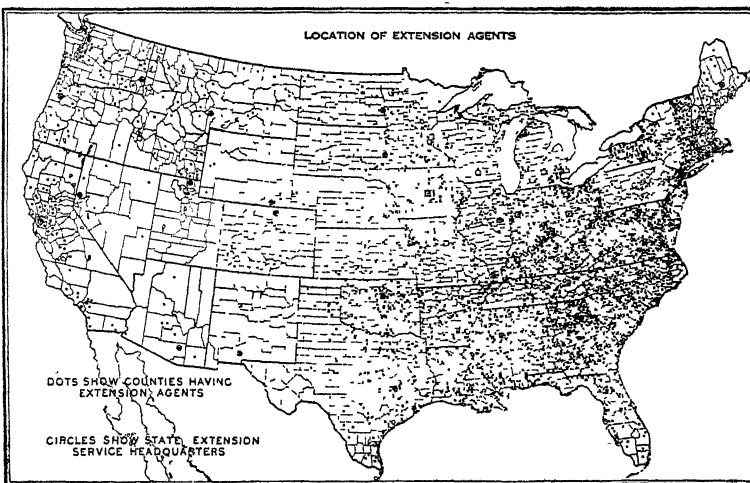


FIG. 12.—One of the means by which the extension work of the department is carried on is through the county extension agents in agriculture and home economics. In 1921 about 2,425 persons were engaged in county extension agent work in approximately 2,000 of the 2,650 counties having enough agriculture to employ an agent. The total number of counties in the United States is about 3,000.

Confidence Shown in Extension Work.

The extension work of the department is designed to carry to the farms the results of its research activities. This is done through cooperative arrangement with the agricultural colleges and experiment stations through the agricultural agents who are now working in more than 2,000 counties, as well as by means of the very large number of bulletins in which the application of the work in research is presented in popular form and thus made available to the individual farmer. During the year the two offices of ex

tension work, one for the South and the other for the North and West, have been consolidated. It is expected that under this arrangement some money may be saved and that even more efficient work will be done than in the past.

Confidence in the extension work is strikingly shown by the steady increase of local funds for the support of the extension agents. During the past year about \$16,800,000 was available from Federal, State, and county sources, and of this amount \$5,900,000 was contributed by the county governments and farm organizations. This year the total funds will be about \$18,500,000, of which \$6,900,000 comes from sources within the county.

Special Work Among Negro Farmers.

The special work among the negro farmers of the Southern States has been fully maintained. Not only have the white agents taken an increased interest in aiding the negroes, but the number of negro agents has been somewhat increased. There are now 157 negro men and 91 negro women employed in the county extension work, together with two unusually capable negro men employed by the States Relations Service as general field agents. In the States the responsibility for the administration of the negro work rests on the State agricultural colleges which conduct the work among the white farmers, but the State colleges for negroes cooperate as far as practicable in this branch of the extension service. The work among the negroes has had very useful results in improving both agriculture and race relations, but is at present reaching only a small fraction of the negro farm population. It should be extended more rapidly.

Work Among Farm Women Broadened.

The work among the farm women has been considerably broadened of late and is based more definitely on careful studies of the actual requirements of farm homes and the varying character of the problems which need immediate attention in different regions. It now includes many things relating to the farm home food supply, diet of children and adults, clothing, household equipment and management, care of children and the health of the farm family, as well as the encouragement of agricultural production by women and

girls, where this is needed to increase their income or to supply their families with a more varied and healthful diet. In the recent public discussion concerning pellagra and other diseases due to malnutrition, the fact was largely lost sight of that in many thousand southern homes the families had better health because under the guidance of the home demonstration agents the women and girls had good gardens, raised poultry, and kept dairy cows, either doing all the work themselves or enlisting the assistance of the men and boys. There has also been increasing cooperation of the extension agents with the Federal, State, and local health services, the Red Cross, and private associations dealing with the affairs of rural communities.



FIG. 13.—Pig clubs show the way to better stock. Left to right, the breeds are . Poland China, Duroc Jersey, Berkshire, Chester White, Hampshire, and Tamworth.

The boys' and girls' club work continues to have well-merited popularity and is a great inspiration to many thousands of our farm children. In many cases their achievements in the production of excellent crops and animals serve as examples which the adult farmers are very glad to follow. This work is leading an increased number of farm boys and girls to see the advantages of technical education in agriculture and home economics, so that former club members are now found in considerable numbers in our schools and colleges where these subjects are taught.

Agencies Employed in Extension.

Some of the agencies through which the extension work is carried on are:

Two thousand four hundred and twenty-five persons engaged in county-agent work in approximately 2,000 of the 2,650 counties having enough agriculture to employ an agent. The total number of the counties in the United States is about 3,000.

Nine hundred and fifty persons engaged in home demonstration work in 725 counties.

Three hundred and five persons engaged in boys' and girls' club work.

Special extension workers in farm management and farm economics.

Special dairy extension workers.

One thousand two hundred and sixty Farmers' Bulletins and 1,037 technical and scientific bulletins covering practically all phases of the department's work have been issued up to date.

Press service to approximately 17,000 publications, including newspapers, agricultural journals, trade and professional journals, church papers, magazines, etc.

Exhibits at agricultural expositions and fairs.

Motion pictures, which are furnished free for exhibition at various kinds of agricultural gatherings.

The Assistant Secretary of Agriculture was chosen with especial reference to his experience in extension work, in addition to his general qualifications for the position. He has been assigned to general supervision over this work and already has under way plans for the coordination of the various extension activities, including the publication and information work. I feel sure that under his guidance this work will be greatly strengthened during the coming year.

There is a growing feeling in the department and in the State extension divisions that more attention should be given to a unified extension program for the entire farm family and less to separate divisions of work along the lines of sex and age. This consideration will be kept in mind in the contemplated reorganization plans. It also seems wise to give more attention to a national program of agricultural progress. We hope to give the States more material aid along this line.

Service Work Carried On.

In what might be called the field of service is included such work as the crop-reporting service, the market-news service, the weather service, and many others. These activities are neither research nor extension, strictly speaking, although their field is greatly extended by research, and knowledge of the work is spread through the extension serv-

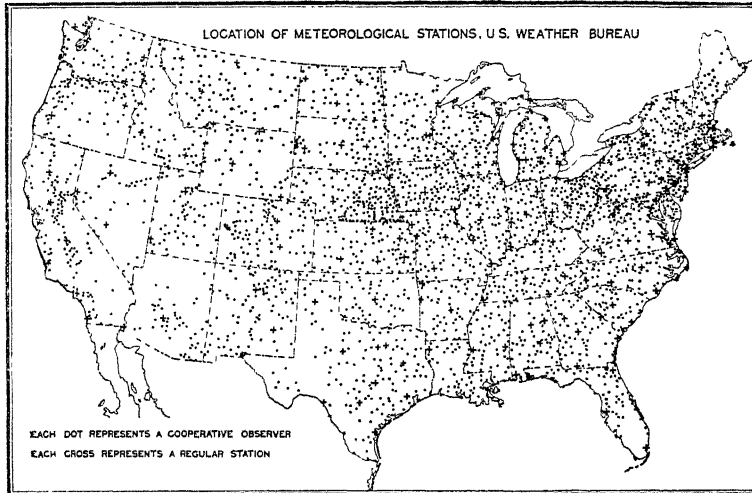


FIG. 14.—One of the services the department renders the American people is the daily weather forecast. These forecasts are based on reports received by telegraph from the 200 regular stations of the Weather Bureau, shown on the map by crosses, and as soon as the forecasts are made they are supplied not only to the regular stations, which in turn supply the city newspapers and meet other requests, but also are telegraphed to about 1,200 other places throughout the country. Public-spirited individuals to the number of 400, without other compensation than the satisfaction of serving, print and mail cards bearing the forecast to all who have requested them in their vicinity and agree to give them public display. About 58,000 cards are now being distributed daily. The forecasts are also distributed by telephone and are available to more than 6,000,000 subscribers, and are now being distributed by radio. The 5,000 cooperative observers, shown by dots on the map, also serve without compensation in collecting climatic information.

ice. Other services, such as are connected with the forest administration, for example, grow out of research and have certain phases of a regulatory nature, but are very largely protective to the interests involved.

Some of the important lines of service work are:

Weather forecasts, covering not only general conditions, but having particular application to various specialized industries, agricultural and otherwise.

Crop reports, designed to afford equal opportunity to producers and buyers to judge of production and, therefore, of demand.

Market-news service, covering both staple and specialized crops.

Meat-inspection service, certifying the wholesomeness of all meat and meat products entering interstate or foreign trade.

Inspection service, available alike to producer and distributor, by which the condition of fruits and vegetables and other food products is definitely fixed at the time of shipment or of arrival at destination.

Inspection service for the War Finance Corporation.

Inspection of certain food supplies for the Army and the Navy.

An office of development through which the discoveries of the research workers are made available to the industrial world.

Aid in improving the quality of their output to manufacturers using agricultural products as raw materials.

The following periodical publications are issued in connection with these services:

Daily.—Weather map; market reports as follows: On butter, cheese, eggs, and dressed poultry; on perishable fruits and vegetables; on meat-trade conditions and wholesale prices; on live-stock markets; and a general market-news service.

Weekly.—National Weather and Crop and Snow and Ice Bulletin; Market and Crop Reporter; market reviews as follows: On butter, on cheese, on meat-trade conditions, on live-stock markets, on peanuts, a carlot summary by States.

Semimonthly.—Report on honey and beeswax.

Monthly.—Weather Review; export report; report on fluid-milk market, condensed-milk market, and powdered-milk market; summary of cold-storage holdings of frozen and cured meats and of frozen and mild-cured fish.

Quarterly.—Production report of certain dairy products and oleomargarine.

Stamping Out Plant and Animal Diseases.

The warfare carried on against plant and animal diseases calls for the combined efforts of the research scientist, the extension specialist, and those who have to do with certain regulatory measures. When a new and dangerous plant pest gains lodgment within the country its presence first is detected by the scientist. He makes a study of its life history, if such is not already known, of its natural enemies, if it has such, of its host plants; in short, seeks all possible information that may be of use in fighting it. This knowledge is taken to the farmers in the community in which the pest has appeared and its danger thus made known. A campaign of eradication is then organized, or, if not eradication, then a campaign to check the spread of the pest. In the case of many plant and animal diseases eradication has been found practicable. This is carried on in cooperation with the States, but can be successful only under the authority of the Federal Government which may be exercised in different States.

The possibility of entirely eliminating a pest or disease from our country is an entirely different problem from that of carrying on investigations to limit its injury. For example, the ravages of the codling moth increase the cost of producing apples in an amount averaging about 10 per cent for the whole country. The untreated orchards suffer a direct loss in fruit of from 40 to 80 per cent, or even a total loss, depending on the severity of the infestation. Proper spraying and caring for orchards may reduce the direct loss to a minimum, but the cost of doing this then becomes the burden, and this cost on the average is not far from 10 per cent of the cost of production of the apple. If by the expenditure of any reasonable sum of money this pest could be entirely eliminated from a region or from the United States, it would be worth an enormous sum of money, as it would obviate the expense of fighting it, as well as increase the production of sound fruit.

The cotton-boll weevil destroys \$200,000,000 worth of cotton annually. Any program that offered a reasonable possibility of success in eradicating this pest would warrant the expenditure of many millions of dollars.

Eradication Depends Upon Research.

It is only through the most effective kind of scientific research and thorough organization that any such ambitious eradication programs as above suggested could be carried out. On the other hand, when a new insect pest or plant disease suddenly appears in a small area in the country the expenditure of a relatively large amount of money in a concentrated effort toward its eradication may entirely eliminate what would otherwise be a constant menace to the industry threatened. The foot-and-mouth disease has invaded this country several times, and each time by prompt and vigorous action and the expenditure of a few million dollars the entire live-stock industry, aggregating many billions in value, has been protected from this scourge. Should it once get away from us, eradication would be impossible. In the same way the prompt and efficient attack on the citrus canker in the Gulf coast region resulted in the elimination of a disease that threatened the entire industry. The total cost of this effort to date has been less than \$3,000,000, while the actual destruction caused by the pest during its brief period of injury was many times that amount, and if unchecked it would have entirely eliminated one of the most valuable industries of that region. These are examples of the possibility of success of prompt and effective service. There is always a possibility of failure, and such failures have occurred, notably in the case of the chestnut blight and the white-pine blister rust. These were due to the fact that the diseases were far more widespread before they were discovered than was realized at the time the effort was made. The expenditure of the money was, however, abundantly justified in the possibility that it offered of success. If the chestnut blight had been discovered in time we would still have our chestnut trees. As it is, they have been practically destroyed.

Two other eradication programs are just now in critical stages. The pink bollworm is one of the most serious cotton pests that the world has known. A considerable part of America's success in cotton production has undoubtedly been due in the past to the fact that we did not have this insect to contend with, while nearly all of the competing countries were infested. It has obtained a considerable foothold in

Texas and Louisiana. The next year or so will determine whether the campaign of the department to eliminate it is to be a success or not. If successful, the cotton industry will be in a favorable situation. If the pest escapes into the large cotton-growing regions, it will then be but a question of holding it to the smallest possible areas, with the practical certainty that ultimately it will reach the entire cotton-growing region.

In anticipation of the possibility of such misfortune trained men have been sent to cotton-growing regions in other countries to study cultural methods which may be followed to reduce the damage done by this pest. Similar work has been successful in the fight against the boll weevil. As a result of the research applied to cotton during the period of the boll-weevil invasion it has been possible to develop superior varieties and improved methods of cultivation that greatly reduce the injuries or make good the losses that the boll weevil inflicts. Most rapid progress in growing the improved varieties is made in communities which devote themselves, under a plan of community organization, to the production of a single variety.

The gipsy moth has been present in Massachusetts for many years. Owing to the favorable direction of the prevailing winds the department has been enabled to hold this pest from spreading to the south and west. During this period a number of new infestations—mainly from European shipments—have been discovered in different parts of the United States. These have been promptly attacked and in every case have been eradicated. A little more than a year ago a serious infestation was found in New Jersey which had evidently been there for a number of years and had increased to an alarming extent. This outbreak is a serious menace to the entire forest, shade, and fruit tree industry throughout the eastern area. The same winds which have been so favorable in helping to hold the New England area in check will undoubtedly sweep this infestation northward and eastward if unchecked until it will devastate the entire New England region. Special appropriations have been granted for the purpose of eradicating this infestation, and a two hundred thousand dollar increase is being requested in the regular appropriation for the next fiscal year

to continue this work. It is hoped that by aggressive action this outbreak may be confined to its original area and rapidly reduced until it is completely eradicated.

Steady Progress Against Animal Scourges.

There are other types of eradication work, such as the fight against the cattle tick, in which the work goes on year after year, making steady progress. The tick-fever line has been pushed gradually southward until it appears that within a very few years the entire United States will be freed from Texas fever, which has greatly retarded the progress of

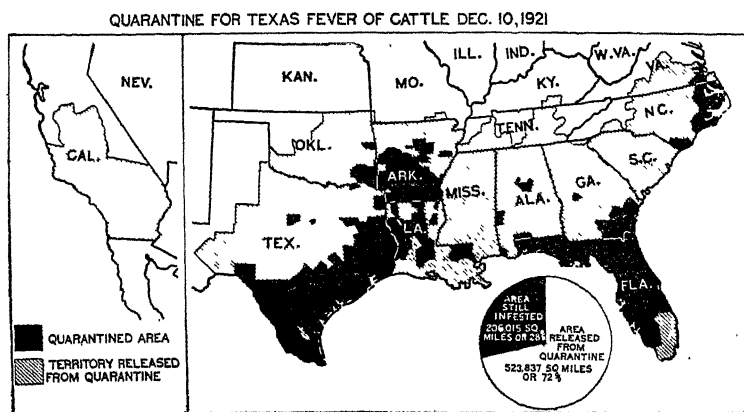


FIG. 15.—The cattle tick, which transmits Texas fever in cattle, and formerly infested all of the Cotton Belt and the southern portion of California, has now been practically eradicated from most of this region. The infested areas at present include a belt of counties near the coast in Virginia, North Carolina, and Georgia, most of Florida, and a broad belt extending from central Arkansas southwestward to southern Texas. Nearly three-fourths of the area originally infested has been released from quarantine.

live-stock production in the South. It is worthy of note here that this program was made possible through discovery by the scientists of the department of the transmission of the fever by the cattle tick, a most valuable contribution to our knowledge of the transmission of many other diseases of animals and of human beings.

The practical means of eradicating tuberculosis in animals also originated in the discovery of a scientific test by which the presence of the disease is revealed. The use of this test makes possible the elimination of this dread disease. To begin with, it was used by a limited number of breeders of

pure-bred stock who desired to free their own herds from disease. Then a plan for cooperation by the Federal Government, the States, and the owners of cattle was worked out by which all the cattle of a community might be tested and the diseased ones eliminated. Were it possible to prosecute this work more vigorously there seems good reason to believe that the live stock of the country could be freed from tuberculosis. Unfortunately, sufficient Government and State funds are not available to prosecute this campaign as rapidly as live-stock owners wish. The Federal Government appropriated \$1,000,000 to be used for partial indemnity during the year beginning July 1, 1921. This was to be paid only when States contributed an equivalent amount. Before four months of this fiscal year had elapsed the allocation of Federal funds had been exhausted in a number of States, and here the warfare against tuberculosis must practically stop unless further appropriations are made. With one exception, it is believed that every State to which Federal money has been allotted for this purpose will have used all of those funds before the end of the fiscal year. It is unfortunate that adequate sums are not available now. Cattle are cheap, the public interest is aroused, and the work of eradicating tuberculosis would go forward most satisfactorily were the funds at hand.

The common barberry, the bush which carries the black stem rust of wheat from one year's crop to another, is being eradicated from 11 of the upper Mississippi Valley States, the great wheat belt of the United States. This is another campaign that is now under way and has already reached the stage in which it is consolidating areas from which the pest has been eliminated. Unexpected difficulties have arisen from time to time in this as in other eradication campaigns. Considerable areas of wild barberries have been discovered in a number of places that were undoubtedly responsible for much of the injury of the years past. Sporadic outbreaks of rust appeared in the wheat fields in this area last season, but no general epidemic, such as appeared in 1916, has occurred since the beginning of the barberry removal campaign.

The eradication of predacious animals, which have been so destructive to the live-stock interests of the western re-

gions, as well as the eradication of prairie dogs, ground squirrels, and other rodents, which have annually been destroying the grass and grain crops on vast areas, are other programs which are in a formative stage. Already some of these campaigns have reached the point of extermination over large areas, and as time progresses and the people come to recognize the value of this work undoubtedly the areas will be extended and a general extermination of some of these pests undertaken.

Further Research Necessary to Eradication.

The hog-cholera control program has not yet reached the eradication stage. More scientific work must be done before it will be possible to put the handling of this disease on the same footing with tuberculosis eradication. It is one of the most serious menaces of the live-stock industry and it is to be hoped that a method of absolute control may be speedily found.

There is no more fertile field in the range of scientific endeavor than that offered by the possibility of eradication of destructive insects and plant diseases. Pests and diseases not only cause great losses but make much more difficult the effort to adjust production to the needs of consumption. A considerable number of live-stock pests and a number of the worst pests of our cultivated crops are so limited in their food habits or in some stage of their life history that it will be possible to apply eradication methods whenever conditions appear favorable. Most eradication campaigns require a preliminary period of education in the possibilities and opportunities of accomplishment before those interested are willing to cooperate to the extent necessary to make them successful. Most of the failures of eradication campaigns for introduced pests have been due to the lack of understanding of the serious nature of the situation until it was too late for effective work. The cotton-boll weevil could have been eradicated any time during the first five years of its invasion of the United States for a relatively small sum if the cotton growers had only realized the danger that was impending and had been willing to conform to the control measures recommended by the department's scientific staff. On the other hand, the eradication of a

pest of long standing which the people have come to consider a necessary evil may be very difficult, owing to lack of faith in the possibility of the program and a consequent lack of cooperative endeavor.

Record Made in Road Construction.

During the past year more improved roads were built under the Federal-aid road act than during any similar period, the mileage completed being more than three times as great as the entire mileage completed during the preceding years under the act. At the end of the fiscal year 1920 a total of 1,677 miles of Federal-aid road had been completed, and there were 14,940 miles additional under con-

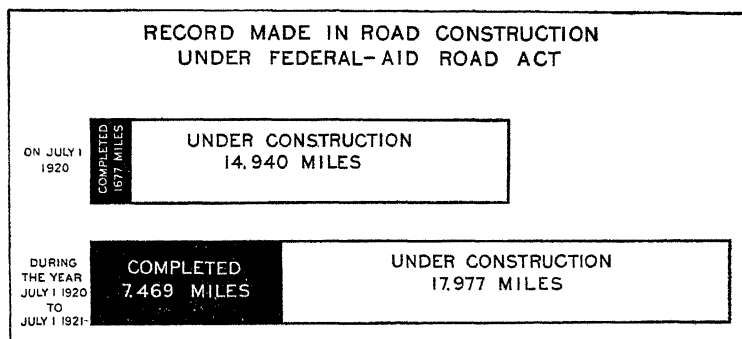


FIG. 16.—During the past year more improved roads were built under the Federal-aid road act than during any similar period, the mileage completed being more than three times as great as the entire mileage completed during the preceding years under the act.

struction and reported as about one-third complete. During the fiscal year 1921, 7,469 miles were completed, and at the end of the year there were 17,977 miles under construction.

Including the completed work on the projects still under construction, the States were entitled to draw Federal funds to the amount of \$118,915,515. In addition there was a balance allotted for projects under construction but not yet earned to the amount of \$66,375,636. The total amount of Federal money in projects completed or under construction at the end of the year was, therefore, \$185,291,151, or about 70 per cent of all the money made available to the States from past appropriations.

Of the \$266,750,000 which was available to the States the unobligated balance was but \$18,793,544. Twelve States had no balance remaining due them. Nine States still had to their credit more than a million dollars unobligated. The remaining States had varying amounts of less than a million dollars still unallotted to definite projects. Under the law these allotments must be taken up by the States before June 30, 1923; otherwise the amount remaining will revert to the Federal Treasury for redistribution among the States.

Economic Conditions Encourage Road Building.

There has been marked improvement during the past year in the economic conditions affecting road work. Rail transportation for needed material has been more satisfactory. Contractors have been glad to undertake new work at lower prices than before, and the increasing unemployment of labor in industries has made a larger supply of labor available for road work at much lower wages. Encouraged by these improved conditions, many States have been offering contracts for large sections of road improvement.

The task of keeping roads in repair is becoming increasingly difficult. Traffic steadily grows and carries heavier loads, and because of this old methods of annual repair will not suffice in the future. Nothing short of constant and systematic attention, involving the immediate repair of defects as quickly as they appear, will maintain our highways in good condition. In the past the Federal Government has not been able to control maintenance, although, as a rule, the States have acted in good faith, and at the close of the year all completed roads were in satisfactory condition. Most of these roads, however, were new and will require far more attention in the future.

New Road Law.

The new Federal highway act passed by Congress in the fall of 1921 is believed to be the most constructive road legislation ever enacted in this country. It carries an appropriation of \$75,000,000 for the fiscal year ending June 30, 1922, of which \$25,000,000 is immediately available, and provides that unexpended sums allotted to any State shall

be available to such State until June 30, 1924, after which any unexpended balances shall be reapportioned to the various States. In the average State this money is expended in the proportion of \$43 from the Federal Government to each \$57 provided by the State. Each State must have a properly organized and equipped State highway department. Projects for road improvement must be submitted by the State and be approved by this department before Federal money is available. The State is required to designate a system of highways not to exceed 7 per cent of the total highway mileage of such State. This selected system shall be divided into two classes, one to be known as primary or interstate highways, which shall not exceed three-sevenths of such system, and the other to be known as secondary or inter-county highways, which shall consist of the remainder of such system. Not more than 60 per cent of Federal-aid money shall be expended on the primary or interstate highways except with the approval of the State highway department, and the States are required to make provision of State funds for construction, reconstruction, and maintenance of all Federal-aid highways, which funds shall be under the direct control of the State highway department.

Only such durable types of surfacing as will adequately meet existing and probable future traffic needs and conditions may be included as part of the 7 per cent system, and all such construction must have the approval of the Secretary of Agriculture. In States having large areas of Government land provision is made for larger relative Federal aid.

Road Maintenance Insured by New Law.

The matter of maintenance seems to be safeguarded by this new law in a thoroughly satisfactory way. It is provided that if the State fails to maintain any highway which has been improved through Federal aid, the Secretary of Agriculture shall bring this delinquency to the attention of the State. If within 90 days such highway has not been placed in a proper state of repair, the Secretary shall proceed to have it placed in such condition and charge the cost thereof against the State's apportionment of Federal-aid funds. He shall also refuse to approve any additional proj-

ects in the State until the State has reimbursed the Federal Government for amount of Federal-aid money spent for such maintenance work. The Secretary is authorized to have such maintenance work done as may be necessary. Responsibility for maintenance, therefore, can not be avoided.

An appropriation of \$5,000,000 for the fiscal year 1922 and \$10,000,000 for the fiscal year 1923 is made for building roads in the national forests.

The Secretary of War is authorized and directed to transfer to the Secretary of Agriculture upon his request war materials, equipment, and supplies now or hereafter declared surplus from stock suitable for use in highway improvement, and this material may be distributed to the States on the same basis as Federal aid funds are distributed, as much as 10 per cent being reserved for Federal use in road construction.

Research Problems in Road Construction.

The Secretary of Agriculture is authorized to set aside and retain 2½ per cent of the total appropriation, to be used in administering the act and in conducting highway research. The importance of such research is increasingly evident. The demands of our highway traffic are becoming more severe. The increasing use of large motor trucks presents maintenance difficulties unknown a few years ago. The Department of Agriculture is conducting many scientific investigations with a view to improved road construction, and especially to determine the effect of vehicular impact on road surfaces. Short stretches of roads of different types are being built and submitted to the most severe traffic tests. The department also is cooperating with the various State highway departments and scientific institutions in similar investigations. It is not too much to say that the research work already done has yielded more precise scientific knowledge of highway construction and maintenance than we have ever before possessed. When we consider the enormous sums which are now being expended annually for road construction, the relatively small provision made for research work should bring exceedingly large returns.

The foregoing is a very brief outline of the more important provisions of the new Federal aid act. Under the wise administration of this act first-class road construction should proceed as rapidly as is wise and safe.

Surplus War Material for Road Work.

Under previous acts of Congress large quantities of surplus war materials have been distributed among the States. But for the use of this material the work of the State highway departments under the difficult conditions of the past two years would have been almost impossible. This equipment was bought by the Government for use in war and the distribution of the surplus for road work, now that its need for war purposes no longer exists, is making available for the use of the taxpayer simply a return for the money he has provided. Up to the end of the fiscal year approximately \$130,000,000 worth of this material had been transferred, including \$11,000,000 worth which has been retained by the Department of Agriculture for use in connection with its various road-building activities. Approximately 27,000 motor vehicles were included in the material that has been distributed. As was to be expected, much of this surplus material was in bad condition and some of it not fit for further use. The cost of distributing the material is borne by the States. Organization for intelligent distribution and use of these materials is being improved steadily.

The National Forests.

Until recent years the forests of the United States were looked upon as the gift of a beneficent Creator, ready prepared for the harvest, for the profit of those individual citizens to whom they were most freely parceled out by a liberal Government. While Federal funds were appropriated for forest investigations in 1876, the first forest reserves were not created until 1891, and not until 1905 were the national forests formally designated as such and placed under the administration of the Department of Agriculture. Only since the date last named has there been a definite national forest policy. It was high time. Of the more than 800,000,000 acres of original forest area there now remain

but 137,000,000 acres in virgin forest, and more than half of the remaining timber supply is in the West Coast States, which means that the lumber must pay a heavy transportation charge before it reaches the large consuming regions.

The cutting of these virgin forests was done wastefully and with little thought of growing a second crop of timber. It was a question of immediate profit, not future need. This has resulted in a staggering loss in timber production and has imperiled our future supply of wood. More than this, in mountain areas the evil extends to soil erosion steadily increasing in volume and destructiveness, and irregularities

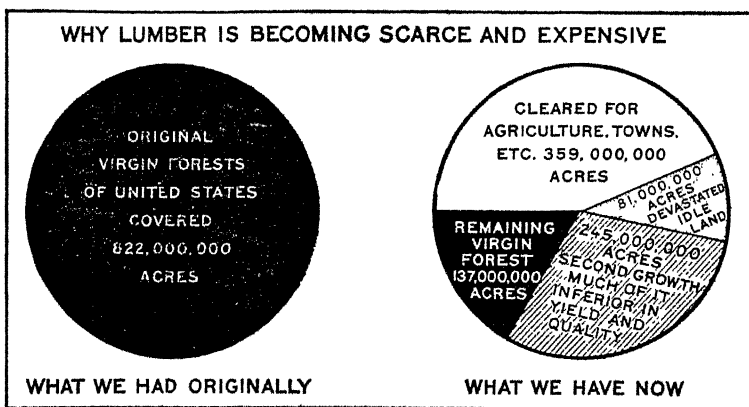


FIG. 17.—Over four-fifths of the originally forested land has been cut-over. About half of this cut-over land has been cleared for agriculture, cities, roads, etc., and the other half is growing up to trees, mostly of poorer quality than the virgin forest, or has been so frequently devastated by fire that trees can not get a start.

in stream flow ranging from excessive floods to excessive periods of low water. The denudation of mountain lands under private misuse had much to do with our difficulties in maintaining the navigability of streams and preserving regular sources of water supply urgently needed for irrigation. Recognition of this danger brought about the establishment of our national forests, which now aggregate 156,000,000 acres, equal to one-fifth of our timber-growing land.

National Forest Policy.

The forest policy which has been developed by the Department of Agriculture since the forests were placed under it contemplates:

First. The administration of the national forests in such a way as to promote the greatest possible utilization for all purposes and at the same time the greatest possible growth of timber. This includes protection from fire, regulation of cutting, tree planting, and forest management to secure the maximum growth of timber; full utilization of forage resources for live-stock raising; classification of lands and the elimination of areas most suitable for farming; the use of lands for a wide range of purposes, including industrial developments and recreation; the fullest possible development of water powers; the readjustment of boundaries to include forest lands and to exclude other lands. While the national forests are being administered as national property, the well-being of local communities, which are largely agricultural in character, is a primary consideration.

Second. The extension of the national forests through the purchase of lands which will protect the watersheds of navigable streams. The national forests established by Executive order or by legislation now cover the headwaters of nearly all the important streams beyond the Mississippi and protect enormous investments in irrigation works, irrigable farms, and hydro-electric development. They are now slowly being extended by purchases over the watersheds of navigable streams in the eastern States and should be extended still further as rapidly as possible. This policy represents to-day the most striking application of public foresight to land problems in the history of the United States.

Third. Scientific research with a view to—

(a) Ascertaining and demonstrating through the activities of forest experiment stations the cheapest and most effective methods of growing the maximum timber crops of the best species.

(b) Products investigations, centered mainly at the Forest Products Laboratory at Madison, Wis., to ascertain and demonstrate means of preventing waste and the most effective means for the manufacture and utilization of our forest resources. These investigations are designed to extend the life of our present resources, reduce to a minimum the production necessary to meet future requirements, and indirectly to make the growing of timber more profitable.

(c) Investigations of timber resources, the extent of forest lands, and other economic questions, such as timber taxation, in order to secure the data which must underlie the development and application of a national-forest policy.

Fourth. Dissemination of information, and cooperation with States, timberland owners, and farmers, in the protection and management of public and privately owned forests and farm woodlots. These activities include—

(a) Fire protection through cooperation between the Federal Government, the State governments, and private owners.

(b) Cooperation with the management of privately owned timberlands to check their devastation and assure the continued use for timber growing of lands not better suited for other purposes.

(c) The dissemination of information which will make possible greater and better production on the 200,000,000 acres of farm woodlots owned by the individual farmers of the Nation. Woodlot products now rank in value as one of the first three or four principal farms crops of the country. The yield of these farm woodlots can be immensely increased by better methods.

(d) Publicly owned forests with the greatest additions which can be anticipated can not alone meet our requirements for wood. The department is therefore attempting by all means at its disposal to secure the adoption of a national policy for the production of timber on the privately owned lands most suitable for this purpose.

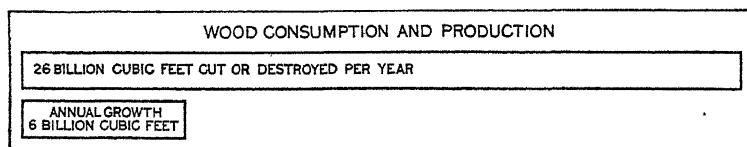


FIG. 18.—The people of the United States are now consuming annually, or permitting to be destroyed by fire, or otherwise, more than four times as much wood as is being grown. To meet the Nation's demand, wood should be grown as other crops are grown.

Conserving the Forests.

During the 16 years the Department of Agriculture has administered the national forests it has secured and trained an administrative force remarkable for its efficiency. Meth-

ods of cutting timber have been developed under which the forest reproduces naturally, and these requirements have been so harmonized with the practical limitations of lumbering that the demand for national-forest timber has grown steadily. The condition of the national-forest ranges has been very greatly improved and at the same time the stock which they can support without damage has been increased by approximately one-third. A system of fire protection has been established which has stimulated fire protection throughout the United States and is serving as a model to State and private agencies alike. In general, all national-forest resources have been brought into use. Western public sentiment, at first decidedly hostile, now almost universally supports the present form of administration, and western stockmen have even gone so far in many instances as to demand the extension of the national-forest system of range management to the remaining public grazing lands; in short, the national forests are now vindicated by their fruits.

Some 2,000,000 acres of forest lands have been purchased at the headwaters of navigable streams in the East, and these areas have been placed under an administration comparable with those of the western forests. Favorable progress in purchases was made during the past year.

Forest products investigations, which at their initiation were ignored by the forest industries of the country, have through the demonstration of their benefits permeated the forest industries almost without exception and have given an entirely new conception of the possibilities in the conservation, manufacture, and utilization of forest products. A beginning has been made in the establishment of forest experiment stations which should as rapidly as possible be extended to cover at least all the principal forest regions of the country. Notable contributions have been made to our knowledge of remaining timber supplies and related economic subjects.

Information on the need for timber growing and the best methods for growing and utilizing timber has been widely disseminated. Public opinion has been aroused until now there is a powerful nation-wide support for the adoption of a national policy which will bring about the growing of

timber on privately owned lands to supplement that which can be produced on national forests and other public holdings.

Protection From Fire.

Through the example of the national forests the Forest Service has extended the work of fire protection over the forested areas of one-half of the States of the Union. In its earlier work the efforts of the Forest Service at control-

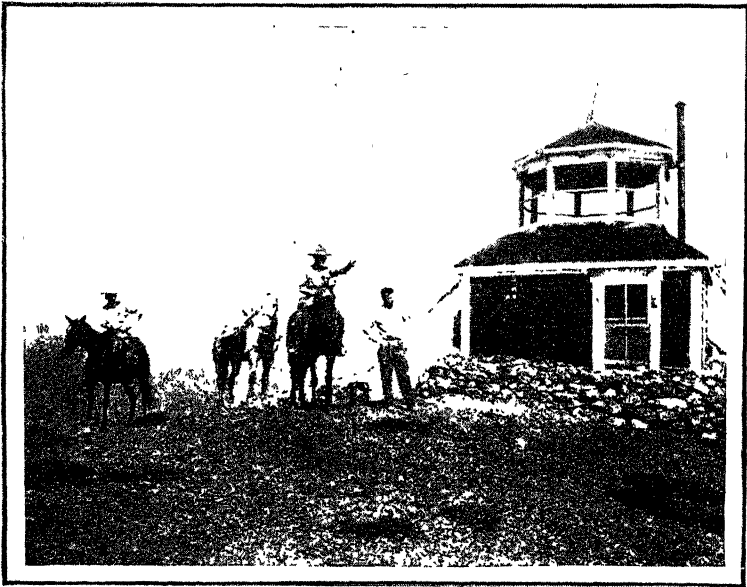


FIG. 19.—A Forest Service fire lookout, on top of a mountain in the West, from which an observer stands guard over a million acres of national forest land from daylight to dark all through the dangerous season.

ling forest fires often met with ridicule as being hopeless or impossible. Last year 24 States cooperated with the Federal Government in forest-fire protection. This year the fund for cooperation with the States was raised from \$125,000 to a new total of \$400,000. The larger appropriation has greatly stimulated local effort along the same lines. The protection of forests against fire is a problem in which there are three parties in interest—the owner, who hopes to sell the timber; the local public, whose carelessness is the cause of part of the hazard; and the Nation, through its interest in navigation and welfare. Efficient fire protection will con-

tribute largely toward the solution of the problem of our future timber supply. Through its efforts in building up a system of fire protection in cooperation with the States the department is making excellent progress. There should be no break in the continuity of this work.

Better Utilization of Forest Products.

The basic function of the Forest Service is to bring about the utilization primarily for timber growing, and incidentally for a wide range of other purposes, of the one-fourth of the land area of the United States best adapted to this purpose in the same way that other units in the Department of Agriculture attempt to bring about the most complete utilization for agricultural production of the part of the remaining three-fourths which is most suitable for this purpose. The Forest Service is a part of the Department of Agriculture primarily because of this basic use of land. It is related to the department, further, in the utilization of some 156,000,000 acres of national forests for the grazing of live stock, a strictly agricultural function which involves cooperation with both the Bureaus of Animal Industry and Plant Industry. It is related in the extension of road and trail systems on the national forests in the interests of agricultural communities as well as to provide communications for fire protection and for general administration, and this involves cooperation with the Bureau of Public Roads. It is related in the development of forestry on the 200,000,000 acres of woodlots owned by farmers and cooperates in this function with the States Relations Service and its widely extended organization of county agents. In its research activities the Forest Service cooperates with practically every other bureau in various economic investigations; with the Weather Bureau, in investigations on the relation of forests to stream flow and the general relations of climate to forest growth and fire protection; with the Bureaus of Animal and Plant Industry in a wide range of investigations covering both utilization of the national forests for grazing, the work of the forest experiment stations, and finally, the protection of forests and forest products from fungous diseases.

Forest Management an Agricultural Problem.

Investigations to reduce enormous losses through decay of pulp wood and wood pulp were conducted jointly by the

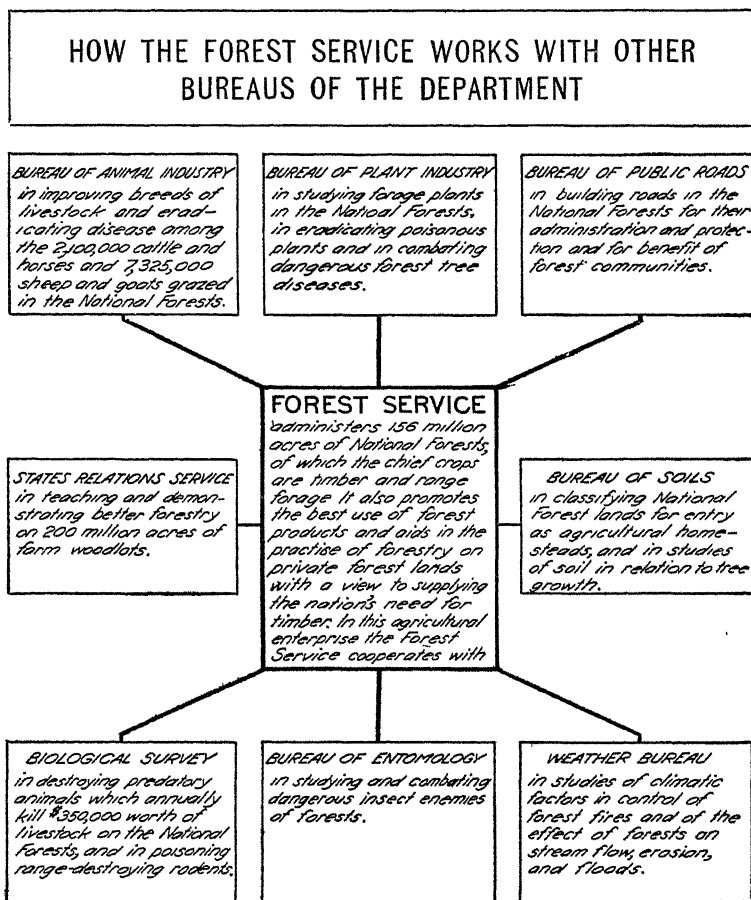


FIG. 20.—The Forest Service is an integral part of the Department of Agriculture in serving the farmers, who manage nearly 40 per cent of the forest land in the United States, the stockmen of the West, who graze over 9,000,000 head of stock in the national forests, the owners of the 200 million acres of timberland not in farms nor in the national forests, who often need technical advice and assistance, and all consumers of lumber and forest products, for whom it is providing a permanent, though limited, supply of timber from the national forests, and investigating the most economical methods of wood utilization.

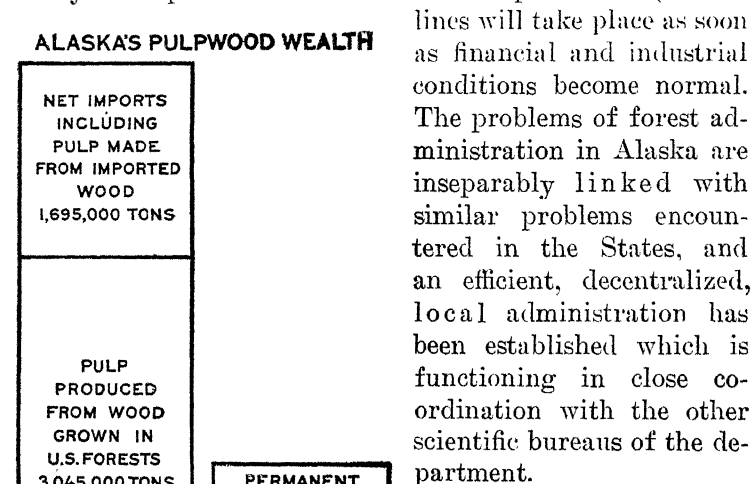
Forest Service and the Bureau of Plant Industry. Cooperation with the Bureau of Entomology and with the Biological Survey covers both insect and animal attacks on forest

growth. In perfecting plans for controlling an insect infestation on forest lands under its jurisdiction the Department of the Interior has recently found it advisable to agree that the work should be handled by the Forest Service working in cooperation with the Bureau of Entomology. The Bureau of Soils assists the Forest Service in the studies of soils and their bearing on the life of forest trees and forage plants, and further, in land classification for agricultural homestead settlement. The Bureau of Crop Estimates secures information on the needs of stockmen and farmers for public and national forest ranges which aids the national forest administration, and collects also data on the products of farm woodlots which is of value in the development of farm forestry. In short, having largely exhausted the forest crop grown in advance, the problem now is to use more wisely what remains and to grow other crops to meet our needs. That is to say, forestry is a distinctly agricultural business. The function of the department as a whole includes efforts for the production and the most effective manufacture, distribution, and utilization of the products of both farm and forest for the benefit of the country at large. Finally, the agricultural industry itself is the largest owner of timberlands and the largest user of forest products, and as such is vitally interested in the administration of the forests.

Paper Making in Alaska.

Worthy of special mention is the progress which has been made in calling the attention of capitalists and newsprint manufacturers to the splendid opportunities offered by the two great national forests in Alaska for the establishment of an important industry in that region. The Tongass National Forest, situated in the southeastern part of the Territory, has a stand of not less than 70,000,000,000 feet of timber within its area of about 15,000,000 acres. The Forest Service, after a careful study of these resources and a scientific determination of the value of such Alaskan timbers for purposes of paper manufacture, has divided the forest into 14 development regions, each one of which contains sufficient water power potentialities and sufficient timber to run a large paper-manufacturing plant permanently. It is estimated

that under the plans now worked out the two national forests in Alaska can furnish *perpetually* 2,000,000 cords of pulpwood annually, amounting to an equivalent of one-third of our present consumption. Two large sales have already been made and one small mill erected. It is confidently anticipated that extensive development along these



**PULP CONSUMPTION
OF UNITED STATES**

**ALASKA'S
POTENTIAL PULP
PRODUCTION**

FIG. 21.—The United States can and should grow enough pulpwood for its entire paper supply, instead of importing large quantities of pulpwood, pulp, and paper at high prices. The national forests of Alaska alone, if continued under their present scientific management, will permanently supply more than one-fourth of our present yearly demand for paper pulp.

lines will take place as soon as financial and industrial conditions become normal. The problems of forest administration in Alaska are inseparably linked with similar problems encountered in the States, and an efficient, decentralized, local administration has been established which is functioning in close co-ordination with the other scientific bureaus of the department.

The Department in Alaska.

The service rendered by the Department of Agriculture in Alaska is exactly the same sort of service that it renders in the various States and Territories, modified, of course, to meet local conditions. It maintains in Alaska nine stations of the Weather Bureau. The Biological Sur-

vvey has four stations which give attention to the reindeer and land fur-bearing animals. The Forest Service, as has been noted in dealing with its activities in this report, has charge of the large national forests there. The Bureau of Public Roads handles forest-road construction under the Federal-aid act. Extension work through the States Relations Service is car-

ried on from five different agricultural experiment stations scattered through the Territory. Through these activities the people of Alaska have the same benefit from the work done by the Department of Agriculture as have the people of the States.

Because of the distance the representatives of the department in Alaska have been given larger powers than representatives in the States. The effort has been to delegate the largest possible authority in order that prompt decisions may be made on the ground.

Better Housing Needed for Department.

The offices and laboratories of the department are scattered in more than 40 buildings in various parts of the city of Washington. This results in waste of a tremendous amount of time and money for which the Government must pay. Efficiency is impaired by difficulty of personal contact between the Secretary and the officers of the department, as well as between bureau chiefs and units of their own respective bureaus. Many units which are closely related organically are so separated by the exigencies of housing space that much confusion exists and full and efficient utilization of the services of the workers is impossible. The necessary transmission of mail and packages between so many scattered locations requires a very large messenger force, while the guarding of these scattered buildings, by day and night, necessarily entails a force of watchmen much larger than would be needed for a smaller number of suitable buildings properly located. In addition it is a source of constant embarrassment to the department that visitors who have business to transact with the Government must be referred from building to building, frequently from one part of the city to another.

Of the buildings owned by the Government and occupied by the department, several are of the temporary type, erected hurriedly during the war, highly inflammable, and otherwise unsuited to the work of the department. The same is true of some of the rented buildings. In several of these buildings the valuable property and records of the Government are continually exposed to the risk of fire, and there is even apprehension of loss of life.

The prompt construction of a large modern office building for the use of the various scattered units of the department should be a profitable financial investment and would add immensely to the efficiency with which its work is carried on.

Capable Leadership Essential in Department Work.

The most important single problem before the department at the present time is that of securing and holding the right kind of leadership in its different lines of work. The possibility of economically and efficiently carrying out a given project depends upon the vision and resourcefulness of the individual assigned the task. He must have technical training requisite to meet all the intricacies of the situation, administrative ability sufficient to organize and lead his force, and a personality that will win confidence and respect. Individuals having all these qualities are rare, but once secured are the very foundation of an efficient scientific organization. With this type of leadership in all divisions of the work the highest possible efficiency can be secured with a minimum expenditure of funds.

On the other hand, with a leadership lacking in training or vision the essential point of an investigation or the fundamental principle which gives value to another type of service may be neglected and the entire expenditure may accomplish little or nothing of permanent advantage. With adequate training and the proper personal qualities but without administrative ability the project may be prosecuted with the right objective but be ineffective and wasteful in operation.

In research work it is doubly important that the project leader possess these qualities, for much of our research is of such a nature that it is difficult or impossible for those not familiar with the problems involved to determine whether the methods employed are such as to finally secure the desired results. Great importance is therefore attached to reliance and dependability in leadership. In recommending in its estimates for the next fiscal year advancement in salaries for certain of the administrative leaders of the department, and especially in recommending the increase in the maximum possible to pay scientific workers from \$4,500 to \$6,500, the department is acting solely from the standpoint of econ-

omy and efficiency in the expenditure of these funds. A given amount of money wisely expended will accomplish very much greater results than double that amount used in the maintenance of an organization without a definite aim or purpose.

Need for Better Salaries.

The situation as to salaries grows worse each year. Efficient leaders in the different lines of the department's work are one by one leaving the service to accept employment at higher rates of compensation or under more favorable circumstances. The salaries in the Department of Agriculture were fully comparable with those in the better grade of educational and research institutions before the war period. Since that time these institutions by the pressure of commercial interests and higher wage standards in other lines of effort have advanced their salary scale from time to time until now many of the endowed institutions, such as Columbia, Yale, Harvard, Stanford, and Chicago, are paying professorial salaries of from \$7,500 to \$10,000. Harvard, for example, pays the heads of all of its departments from \$6,000 to \$8,000. These salaries promise to be increased rather than diminished.

In the same way the State-supported institutions have raised their salary standards until such institutions as Wisconsin, Minnesota, Illinois, Ohio, and California are paying from \$6,000 up. When a single institution like Chicago or Wisconsin has 125 professors receiving an average salary quite a little above \$5,000, it is not difficult to see why the department has trouble in retaining its bureau chiefs with an average salary of \$4,700 and its project leaders with an average salary of \$3,500. The bureau chiefs should rank in training and experience and in professorial qualities with college presidents. In fact, two of them have refused such presidencies within the past year. The project leaders of the department have larger administrative responsibilities and should have higher qualifications, on the average, than the deans and directors of our educational institutions whose salaries average from \$1,000 to \$2,000 higher than those of the professors of the corresponding institutions. A number of the former employees of the department are receiving sal-

aries ranging from \$10,000 to \$20,000 in commercial positions. Loyalty and opportunity for great public service has held many a scientific worker in the department against a flattering offer from the outside, and because of that spirit it will always be possible for the department to hold its workers at a lower salary than the maximum paid by the educational institutions and for very much less than that offered in the commercial fields. If, however, any satisfactory degree of permanence is to be secured, it will be necessary to reach a salary standard whereby these men will be enabled to maintain a reasonable standard of living for themselves and their families with a small surplus to supplement the totally inadequate retirement provisions of the present time.

If the department is to go forward in its work and meet the increasingly complex problems of the future it must have authority to pay fair salaries. In research work the loss of a scientist not only imperils the leadership of the project but inevitably in leaving he takes with him a knowledge and experience gained at the expense of the Government, which is only to be acquired by his successor by long and painstaking effort; so that even if an equally strong man could be secured the loss through the lack of continuity of the work is usually much greater than the increased outlay that would have been necessary to have insured the continuous services of the individual. From every standpoint, therefore, the high turnover in scientific personnel that the department has been experiencing in recent years is uneconomical and wasteful.

The proposed program of cooperation and correlation of scientific work of the department and the State stations calls for an even higher type of leadership on the part of the department. In order to make such projects feasible and to properly equip the organization for an effective attempt to attack the more fundamental problems which have up to the present time resisted the efforts of isolated workers, such permanent leadership must be secured.

Highly Trained Scientists a National Asset.

The great discoveries of the ages have been made by exceptionally gifted individuals, and the nation that can produce such individuals and provide for the concentration of

their efforts on the problems of most vital interest to national welfare will be successful in the competition of the future. The experience of the war period has amply demonstrated that when the leading scientists of the Nation were called together for the solution of a given problem success was practically assured. The trend of movement of population and civilization in the past few centuries has been toward the center of food production. This tendency will undoubtedly increase. It would therefore seem but the part of wisdom to make adequate provision for leadership and efficiency in matters so vital to national welfare.

Graduate Work in Department.

To maintain continued efficiency in a scientific organization under civil-service regulations some provision must be made for adequate training of those who enter the service in the lower positions. The rapid turnover in personnel during the war and post-war periods has resulted in an extremely rapid advancement of these men. To meet this need the department has provided for graduate training in various lines for the scientific workers. The work is given outside of office hours, is supported entirely by the students, and is therefore unofficial in nature. It is, however, supervised and encouraged by the department. The workers are allowed to take only one course at a time, and everything necessary is done to insure the highest standard for the work, so that it will not only be effective training for the department workers but satisfactory to the graduate institutions of the country. It is expected that the ambitious workers of the department will make arrangements with such graduate institutions for the acceptance of these credits and will ultimately attend these institutions and complete the work required for advanced degrees. Leaves of absence for this purpose are being arranged and closer cooperation with graduate departments in the solution of research problems is being considered.

Some of the strongest scientists of the department are taking charge of courses and a few of the leading graduate institutions have furnished teachers for others. Altogether a most helpful spirit has prevailed. It is expected that other graduate institutions will from time to time assist the department in its efforts and that the scientific men detailed

to temporary appointments in Washington may be available for this service.

Although just getting under way, this increased opportunity is already being reflected in the greater enthusiasm and loyalty of the workers within the department. The most hopeful aspect of the situation, however, is the fact that the ambitious students of the best institutions are again becoming interested in the possibilities and opportunities of Government service. The lack of adequate salary standards and opportunity for obtaining advanced training have made it difficult for the department to attract to its entrance positions in the past the very men who are absolutely essential to the continued efficiency of its work. It is hoped that provision for higher salaries in the advanced positions and enlarged opportunities for graduate work may help us overcome this difficulty.

Conclusion.

In the foregoing I have tried to present truthfully the adverse conditions affecting our agriculture at the present time and the bad effect these conditions are having upon industry and business. The troubles by which the farmer is surrounded are not of his making. In large part they are due to world-wide conditions over which he had no control and the inevitable result of the World War. It is not to be expected that by some miraculous transformation this period of adversity may be turned overnight into a period of prosperity, but there seem to be good reasons for believing that the worst is over and that we may reasonably hope for gradual improvement from now on. A clear recognition of the conditions as they exist should help us to realize this hope.

When finally we emerge from this distressing period we shall find ourselves at the beginning of a new agricultural era. Heretofore we have produced more food products than were needed by our own people. We had land in abundance and of great fertility. Our population is increasing rapidly. We have taken up most of our easily cultivated land. We are not far from the time when home needs will require practically all that we produce in the average year. This means a more intensive agriculture, with larger production per acre and lessened cost, if we are to meet foreign competition and still maintain our standards of living.

The Department of Agriculture is planning to meet these new conditions by strengthening its work in certain directions. Its appropriations from the Federal Government are set forth in the pages which follow. A study of the regular appropriations will show that very nearly two-thirds of the money is spent for regulatory and service work which is of more direct value to the consuming public than to the producers on the farm. The money made available for scientific research and its application to farm problems should be increased in the national interest. As has been said, such money is in the nature of an investment. It results in vast additions to our national wealth. The amounts asked for the coming year, and which have been approved by the Bureau of the Budget, have been reduced to the minimum. In the future these appropriations should be increased just as rapidly as the organization and administration of the department gives reasonable assurance that increased money will be used wisely.

It is planned during the coming year to strengthen certain phases of the work of the department, more especially the scientific research, the application of the results of research to farm practice, more extended studies of marketing farm crops with a view to reducing cost, investigations of both production and consumption at home and abroad for the purpose of better adjusting our own production to market needs, and studies looking toward making available to the farmer those devices of modern business which provide needed credit on easy terms and which may help us to distribute production risks more equitably.

This is a creative department. Also it is a department of service. Its task is to conserve and increase national wealth through the wise utilization of the soil and its products, having in mind constantly the maintenance of the fertility of the soil for the use of the generations to follow us.

In such a task the department should have both the liberal financial support of the Government and the sympathetic interest of all our people.

Respectfully,

HENRY C. WALLACE,
Secretary of Agriculture.

Appropriations.

The cost to the Federal Government of the research, extension, service, and regulatory activities of the department during the fiscal year 1921 was approximately \$32,000,000, as indicated by the following table:

<i>Federal appropriations available for regular work of department</i>	
Agricultural appropriation act, 1921-----	\$31,712,784.00
Less—	
Appropriations for State agricultural experiment stations-----	\$1,440,000
Smith-Lever supplementary funds-----	1,500,000
Short-time rural credits-----	5,000
Immediately available appropriations ex- pended during 1920-----	11,868
	<hr/> 2,956,868.00
	28,755,916.00
Agricultural appropriation act, 1922, immediately available for expenditure during 1921 (exclusive of \$2,000,000 for seed-grain loans to farmers)-----	218,300.00
Deficiency appropriation act, March 1, 1921-----	1,153,000.00
Deficiency appropriation act, June 16, 1921 (exclusive of \$125,000 for printing and binding)-----	496,000.00
Permanent annual appropriation for meat inspection-----	3,000,000.00
Protection of lands involved in Oregon and California forfei- ture suits (Forest Service)-----	25,000.00
Balances of appropriations from prior years-----	3,130,972.49
Printing and binding fund (sundry civil appropriation act, 1921, and deficiency appropriation act of June 16, 1921)---	850,000.00
	<hr/> 37,629,188.49
Unexpended balances, June 30, 1921-----	2,847,303.90
	<hr/>
Actual expenditures from Federal funds-----	34,781,884.59
Less receipts, 1921, deposited in U. S. Treasury (see p. 69)---	2,514,879.37
	<hr/>
Net cost of regular work-----	32,267,005.22

In addition, the following special funds were available for work incident to the department's regular activities:

Special appropriations from receipts.

Roads and trails for States (construction and improvement of roads and trails within national forests)-----	\$892,492.09
Paid from national forest receipts for fiscal year 1921 (see p. 69)-----	\$472,025.24
Balance from receipts, fiscal year 1920-----	420,466.84
Cooperative work, Forest Service (contributions from private sources)-----	2,674,737.61
Receipts for fiscal year 1921 (see p. 69)---	\$1,965,678.20
Balance from receipts, fiscal year 1920----	709,059.41
	<hr/>
Total available-----	3,567,229.70
Actual expenditures from special funds-----	2,488,979.49
	<hr/>
Unexpended balance, June 30, 1921 (available for ex- penditure during fiscal year 1922)-----	1,078,250.21

The total expenditure of \$32,000,000 for the regular work of the department was allotted by types of activity approximately as follows: Research, \$9,000,000; extension, \$3,000,000; service, \$3,000,000; and regulatory work, \$17,000,000.

In this connection it should be pointed out that over one-half of the funds for service and regulatory work were expended in the performance of the primary functions of government rather than for the direct development of agriculture. Such functions as the administration and protection of the national forests, the weather service, enforcement of the food and drugs act and the meat-inspection law, as well as other similar service and law enforcement work, are not conducted in the interest of the producer, but administered for the benefit of all.

The department received during the fiscal year 1921 the following amounts, which were covered into the Treasury:

Receipts of Department of Agriculture, fiscal year 1921.

Weather Bureau: Receipts from United States telegraph lines	\$6,365.84
Forest Service: Sales of timber, grazing fees, and use of forest lands (exclusive of receipts used for construction of roads and trails for States)	2,032,909.97
Bureau of Chemistry:	
Examination of samples of flour, oleomargarine, etc.	1,465.00
Sale of hearings	126.40
Bureau of Biological Survey: Sale of animal skins	9,734.85
Bureau of Soils: Sale of kelp, char, potash, and carbon	13,812.93
Division of Publications: Sale of maps, prints, lantern slides, and card indexes	1,897.35
States Relations Service: Sale of products grown at insular experiment stations	5,153.71
Bureau of Markets:	
Inspection of food products	97,352.00
Grain standard appeals	21,948.43
Warehouse disputes	2,847.00
Classifying cotton	144,530.80
Sale of cotton standards	16,351.40
Sale of loose cotton	16,630.93
Sale of grain	10,817.77
Federal Horticultural Board: Charges for fumigating cars and wagons	60,382.50
Various bureaus: Miscellaneous collections, including sale of condemned Government property	72,552.49
	<hr/>
	2,514,879.37
Forest Service:	
Sale of timber, grazing fees, and use of forest lands (applicable to construction of roads and trails)	\$472,025.25
Contributions for cooperative work	1,965,678.20
	<hr/>
	2,437,703.45
Total receipts, 1921	<hr/>
	4,952,582.82

In addition to the \$32,000,000 expended by the department for the conduct of its investigative, regulatory, and other routine activities, appropriations amounting to \$269,513,180.34 were administered by the department, though no part of them was applied to the prosecution of its regular work. These funds were provided for the following purposes:

For extension work in agriculture and home economics (provided by the Smith-Lever Act of May 8, 1914, and paid direct to the States)-----	\$3, 580, 000. 00
Supplementary Smith-Lever agricultural extension work (provided by the Agricultural appropriation act for 1921)-----	1, 500, 000. 00
Federal aid road construction (provided by the acts of July 11, 1916, and February 28, 1919, including balances from prior years)-----	¹ 259, 703, 180. 34
Rural post roads-----	\$251, 154, 318. 39
Roads and trails within or adjacent to national forests-----	8, 548, 861. 95
Farmers' seed-grain loans (made immediately available by the Agricultural appropriation act for the fiscal year 1922 for expenditure during 1921)-----	2, 000, 000. 00
Payments from national forest receipts for the benefit of county schools and roads-----	1, 285, 000. 00
Research work of State agricultural experiment stations (provided by the Agricultural appropriation act for 1921 and paid direct to the States)-----	1, 440, 000. 00
Study of short-time rural credits (provided by the Agricultural appropriation act for 1921 for use of a special congressional committee)-----	5, 000. 00
Total-----	269, 513, 180. 34

The number of employees in the department on June 30, 1921, was 18,748, a decrease of 628 from June 30, 1920.

¹ \$62,535,342.54 of this amount was actually expended during the fiscal year 1921, leaving a balance of \$187,167,837.80 available for expenditure during the fiscal year 1922.

Review of Agricultural Production and Exports.

Acreage of crops in the United States.

Crop.	1921 (preliminary estimate).	1920	1919	1918	1917	1916	1915	1914	Annual average, 1910-1914.
CEREALS.									
Corn.....	103,850,000	101,699,000	97,170,000	104,467,000	116,730,000	105,296,000	106,197,000	103,435,000	105,240,000
Wheat.....	62,408,000	61,143,000	75,694,000	59,181,000	45,089,000	52,316,000	60,469,000	53,541,000	48,953,000
Oats.....	44,826,000	42,491,000	40,359,000	44,349,000	43,553,000	41,527,000	40,996,000	38,442,000	38,014,000
Barley.....	7,240,000	7,600,000	6,720,000	9,740,000	8,933,000	7,757,000	7,148,000	7,565,000	7,305,000
Rye.....	4,228,000	4,409,000	6,307,000	6,391,000	4,317,000	3,213,000	3,126,000	2,541,000	2,305,000
Buckwheat.....	671,000	701,000	700,000	1,027,000	924,000	828,000	769,000	792,000	826,000
Rice.....	896,000	1,336,000	1,663,000	1,118,550	980,900	869,000	803,000	694,000	733,000
Grain sorghums.....	4,652,000	5,120,000	5,060,000	6,036,000	5,153,000	3,944,000	4,153,000	.....	.....
Total.....	228,771,000	224,490,000	233,073,000	232,309,550	225,679,900	215,750,000	223,664,000	1,207,010,000	1,203,664,000
VEGETABLES.									
Potatoes.....	3,815,000	3,657,000	3,542,000	4,295,000	4,384,000	3,565,000	3,734,000	3,711,000	3,686,000
Sweet potatoes.....	1,086,000	992,000	941,000	940,000	919,000	774,000	731,000	693,000	611,000
Total.....	4,881,000	4,640,000	4,483,000	5,235,000	5,303,000	4,339,000	4,465,000	4,404,000	4,297,000
Tobacco.....	1,473,000	1,960,000	1,951,000	1,647,100	1,518,000	1,413,000	1,369,900	1,224,000	1,209,000
Cotton.....	40,509,000	35,878,000	33,566,000	36,008,000	33,841,000	34,985,000	31,412,000	36,832,000	35,330,000
Grand total.....	265,634,000	266,986,000	273,073,000	273,199,650	266,341,900	256,487,000	260,910,900	249,380,000	244,500,000

1 Excluding grain sorghums.

Crop production in the United States.

[The figures are in round thousands—i. e., 000 omitted.]

Crop.	1921 (preliminary estimate)	1920	1919	1918	1917	1916	1915	1914	Annual average, 1910-1914.
CEREALS.									
Corn.....bushels..	3,080,372	3,208,584	2,811,302	2,502,665	3,065,233	2,566,927	2,994,793	2,672,894	2,732,457
Wheat.....do.....	794,893	833,027	937,979	921,438	636,655	636,318	1,025,801	891,017	728,225
Oats.....do.....	1,060,737	1,496,281	1,184,080	1,538,124	1,592,740	1,251,837	1,549,030	1,141,060	1,157,961
Barley.....do.....	151,181	189,332	147,608	256,225	211,759	182,309	228,851	194,953	186,208
Rye.....do.....	57,918	60,490	75,483	91,041	62,633	48,862	54,050	12,779	57,508
Buckwheat.....do.....	14,079	13,142	14,399	16,905	16,022	11,662	15,056	16,881	17,022
Rice.....do.....	35,105	52,066	41,985	38,606	34,739	40,861	28,917	23,019	21,378
Grain sorghums.....do.....	115,110	137,408	130,734	73,241	61,409	53,858	111,460	.....	.....
Total.....do.....	5,309,395	5,990,330	5,373,520	5,438,245	5,681,400	4,792,634	6,010,988	1,983,143	1,883,819
VEGETABLES.									
Potatoes.....bushels..	346,823	403,296	322,337	411,860	442,108	286,953	359,721	109,921	300,772
Sweet potatoes.....do.....	98,660	103,925	97,126	87,921	83,822	70,955	75,639	56,574	57,117
Beans (commercial).....do.....	9,118	9,077	13,349	17,397	16,045	10,715	10,321	11,585	.....
Onions (commercial).....do.....	12,833	23,525	11,398	19,336	12,376	8,562	7,964	(-)	.....
Cabbage (commercial).....tons..	665	982	357	498	475	255	671	(-)	.....
FRUITS.									
Peaches.....bushels..	32,733	45,620	53,178	33,094	48,765	37,505	64,097	54,109	45,842
Pears.....do.....	10,705	16,805	15,101	13,362	13,281	11,874	11,216	12,086	11,184
Apples.....do.....	96,881	223,677	142,089	169,625	166,749	193,905	230,011	253,200	197,898
Cranberries (3 States).....barrels..	373	449	549	352	249	471	441	697	.....

MISCELLANEOUS.									
Flaxseed.....	bushels.....	8,112	10,774	7,256	13,369	9,164	14,296	14,030	13,749
Sugar beets.....	tons.....	7,782	8,538	6,421	5,049	5,980	6,228	6,511	5,585
Tobacco.....	pounds.....	1,117,682	1,582,225	1,465,481	1,439,071	1,249,276	1,153,278	1,062,267	1,034,079
All hay.....	tons.....	96,802	105,315	104,760	91,139	98,439	110,992	107,263	88,086
Cotton.....	bales.....	7,953	13,440	11,421	12,041	11,302	11,450	11,192	16,135
Sorghum sirup.....	gallons.....	45,554	49,505	39,413	38,387	37,472	13,668	14,823	13,551
Peanuts.....	pounds.....	816,465	841,474	783,273	1,240,102	1,432,581	919,028		
Broom corn (5 States).....	tons.....	3 35	3 36	53	62	57	39	52	
Clover seed.....	bushels.....	1,411	1,944	1,484	1,197	1,488	1,705		

¹ Excludes grain sorghums.² No estimate.³ 7 States.

Exports of domestic foodstuffs and cotton from the United States.

[Reports of Bureau of Foreign and Domestic Commerce, United States Department of Commerce.]

Article exported.	Year ending June 30—									
	1921		Per cent of 1910- 1914.	1920	1919	1918	1917	1916	1915	Annual average, 1910-1914.
	Amount									
Wheat..... bushels.....	203,267,637	515.3	122,430,724	178,582,673	34,118,853	140,831,427	173,274,015	259,642,533	56,913,228	
Wheat flour..... barrels.....	16,183,234	151.5	21,651,961	24,181,979	21,879,951	11,942,778	15,520,669	16,182,765	10,678,635	
Oats..... bushels.....	4,302,346	51.8	33,944,740	96,360,974	105,837,309	88,944,401	95,918,884	96,809,551	8,304,203	
Rye..... do.....	45,735,052	5,350.6	37,463,285	27,540,188	11,990,123	13,260,015	14,532,437	12,544,888	854,765	
Barley..... do.....	20,457,198	259.1	26,571,284	20,457,781	26,285,378	16,381,077	27,473,160	26,754,522	7,805,521	
Corn..... do.....	66,911,093	168.1	14,467,926	16,687,538	40,987,827	64,720,842	38,217,012	48,786,291	30,809,090	
Total, 5 cereals and flour..... pounds.....	28,195,776,780	334.5	16,859,428,924	21,996,905,576	13,951,418,808	19,330,110,628	20,780,577,136	26,567,042,032	8,429,735,124	
Sugar..... do.....	582,698,488	821.0	1,444,030,665	1,115,865,161	576,483,050	1,248,908,286	1,630,150,863	549,007,411	70,976,908	
Dairy products:										
Butter..... do.....	7,829,255	183.0	27,155,834	33,730,960	17,735,966	26,835,092	13,487,481	9,850,704	4,277,955	
Cheese..... do.....	10,825,603	220.2	19,378,158	18,791,553	44,303,076	66,050,013	44,394,301	55,362,917	4,915,502	
Milk (condensed)..... do.....	266,506,031	1,689.5	710,533,270	728,740,509	528,759,292	239,141,231	159,577,620	37,235,627	15,773,900	
Total dairy products pounds.....	285,160,889	1,142.1	757,067,262	781,272,022	590,798,274	352,026,336	217,459,402	102,449,248	24,967,357	

Estimated production of meat and wool.

[The figures are in round thousands, i. e., 000 omitted.]

Product.	1921	1920	1919	1918	1917	1916	1914	1909
Beef and veal ¹.....lbs.	7,082,029	7,399,065	7,142,823	8,110,793	7,384,007	6,670,938	6,078,908	5,138,000
Pork and lard ¹.....do.	10,570,411	10,215,106	11,022,263	10,809,712	8,450,148	10,387,765	8,768,532	8,199,000
Mutton and goat ¹.....do.	601,628	542,575	611,124	504,135	191,205	633,969	739,401	615,000
Total.....do.	18,254,068	18,156,766	18,776,210	19,484,550	16,325,360	17,992,672	15,586,841	16,952,000
Wool (including pulled wool).....do.	273,064	277,903	298,258	298,870	281,892	288,490	290,192	289,420

¹ Estimated for 1914-1921 by the Bureau of Animal Industry.

WHEAT PRODUCTION *and* MARKETING



By C. R. BALL, *Cerealist*, C. E. LEIGHTY, *Agronomist*, Bureau of Plant Industry, O. C. STINE, *Agricultural Economist*, and O. E. BAKER, *Agricultural Economist*, Bureau of Agricultural Economics.

Importance of the Wheat Crop.

WHEAT is one of the most important crops of the United States. It is important because (a) many farmers grow it, (b) a large acreage of land is annually devoted to it, (c) it constitutes an important part of our domestic commerce, (d) it contributes a large part of the value of the exports of the nation, and, most important of all, (e) it is the national bread crop.

In some areas in the United States wheat is almost the only source of income. About one-third, or approximately 2 millions, of the farmers of the United States grow wheat. In many of the northern States more than one-half, and in large areas over 80 per cent, of the farmers are engaged in wheat growing (Fig. 1). In 1921 over 62 millions of acres were harvested. Only corn and hay exceed wheat in the acreage occupied. In the great wheat-growing States there are areas in which more than 50 per cent of the total cultivated land is given over to wheat. In these areas, where there is such specialization in wheat growing, whatever

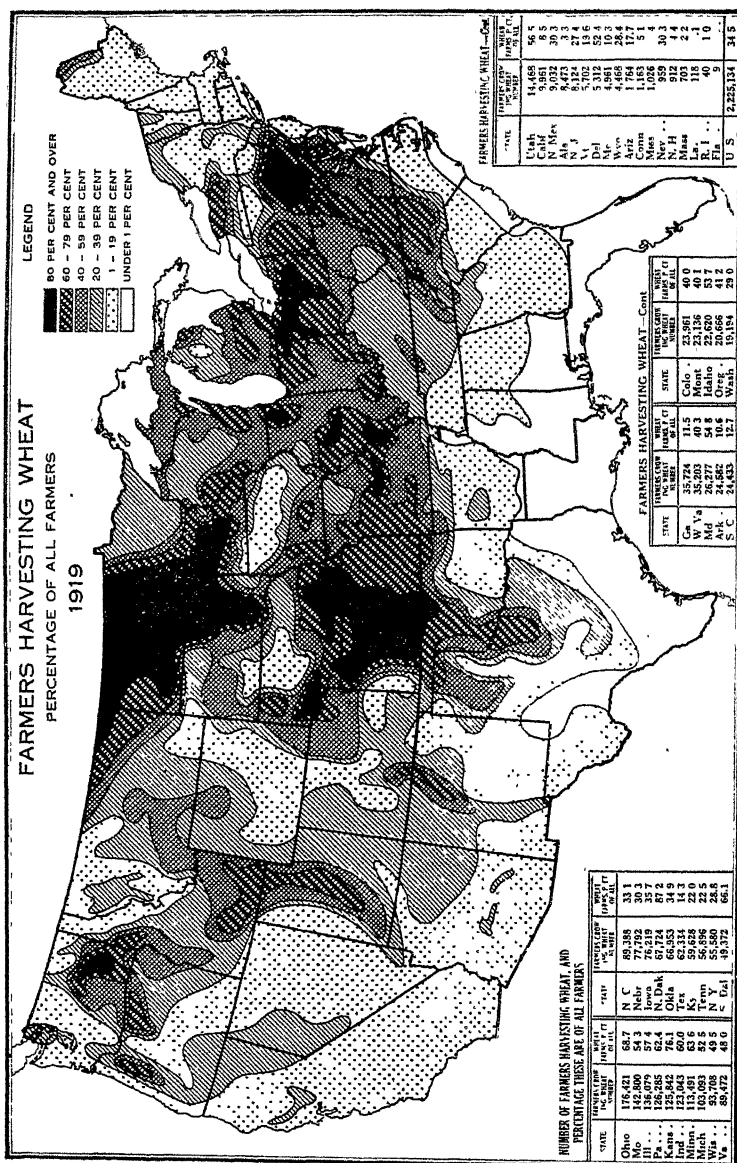


FIG. 1.—Map showing the percentage of all farmers harvesting wheat in 1919. The black areas show where 80 per cent or more of the farmers grow wheat. In New England, the South, and the Southwest comparatively few farmers grow it.

affects yields, cost of production, or the price of wheat not only directly affects the welfare of all the farmers who are dependent upon the crop for a part or all of their income, but also vitally affects the whole community.

Wheat plays an important part in the commercial life of the nation. Normally it is fourth in value among all our crops, being outranked only by corn, hay, and cotton. It enters into the trade to a far greater extent than any other of these crops except cotton. The South, which produces cotton, is dependent upon the North for its wheat and flour. The manufacturing cities of the East depend upon the Midwest for most of their bread supplies.

Wheat and flour made from wheat constitute a very important part of our international trade (Fig. 2). In value of crops exported it stands second only to cotton. Both corn and hay have a total-product value greater than that of wheat, but are exported principally through meat products. Of these products only pork exceeds wheat in value.

Wheat is our great bread crop. The farmers of the United States regularly produce enough wheat not only to supply our own needs for bread but also to export a large quantity to other countries. Our population is increasing, and as consumers we are interested in the trend of wheat production. We want plenty of bread and we want it cheap.

In time of war the supply of wheat is a matter of great concern to the nations involved in the struggle. From the beginning of the World War it was recognized that wheat was as essential to winning the war as were munitions for the Army. The Allies, not having within their own borders a sufficient supply of wheat, made extraordinary efforts to keep open the international trade routes to the countries producing a surplus of wheat.

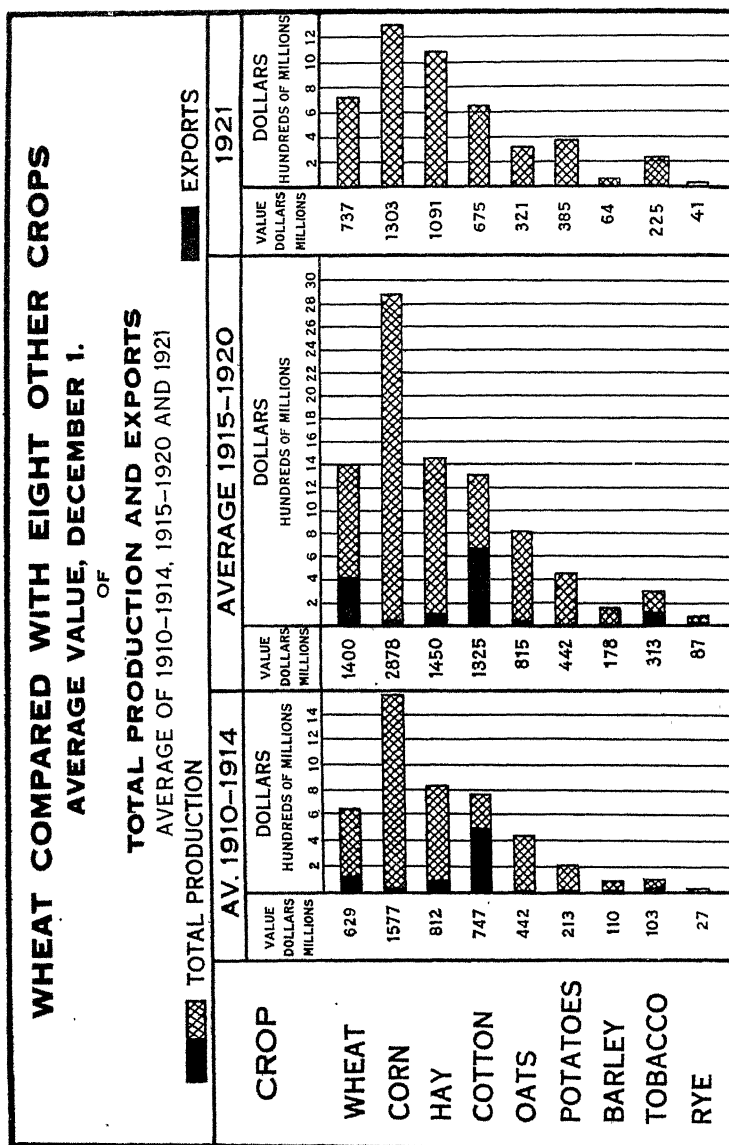


FIG. 2.—Comparative average value of wheat and 8 other crops. Wheat ranked fourth in value in the 11 years 1910 to 1920 and third in 1921, when the value of all crops had shrunk greatly. Wheat ranked second in value of crop exported.

World Production of Wheat.

The wheat growers of the United States have a vital interest in the wheat production of other countries, because the price of wheat on the farms in the United States is determined, in large measure, by the prices paid in the world markets. The distribution of wheat production in the world is shown graphically by the map in Figure 3 and total production in Figure 4. Certain countries stand out on the map as large producers of wheat. European countries produce large quantities of wheat, but most of them consume large quantities also. The important surplus producing countries which compete with the United States in the world markets are Russia, India, Canada, Argentina, and Australia (Figs. 5 and 6).

Wheat is not grown to any extent in the warm, humid parts of the world. It is confined almost entirely to regions with temperate climates. Where the moisture is not excessive, it may be grown in relatively warm climates, as in northern Africa, India, and Mexico. To the north, in Canada and Russia, production is limited by too short growing seasons. In Australia and Argentina, as well as in some parts of North America and Asia, expansion of area is limited by lack of precipitation. There are no available statistics of wheat production in China. Some wheat is grown in China, but the great food crops of the people in that part of the world are rice and various millets. Within the area suitable for growing wheat it must compete with other grain crops such as oats, corn, barley, and rye.

The large number of producers tends to stabilize the markets and, under normal conditions, to insure the world's bread supply. The crops of Russia and the United States (Figs. 5 and 6) constitute a large part of the world crop, but frequently when the crops of the United States are good the Russian crop is short. In 1911 the crops of both of these great producers were short, but the crops of other countries were good and partly offset the shortage. Thus the several countries supplement each other in producing wheat for the world markets. In years in which crops are short in one or

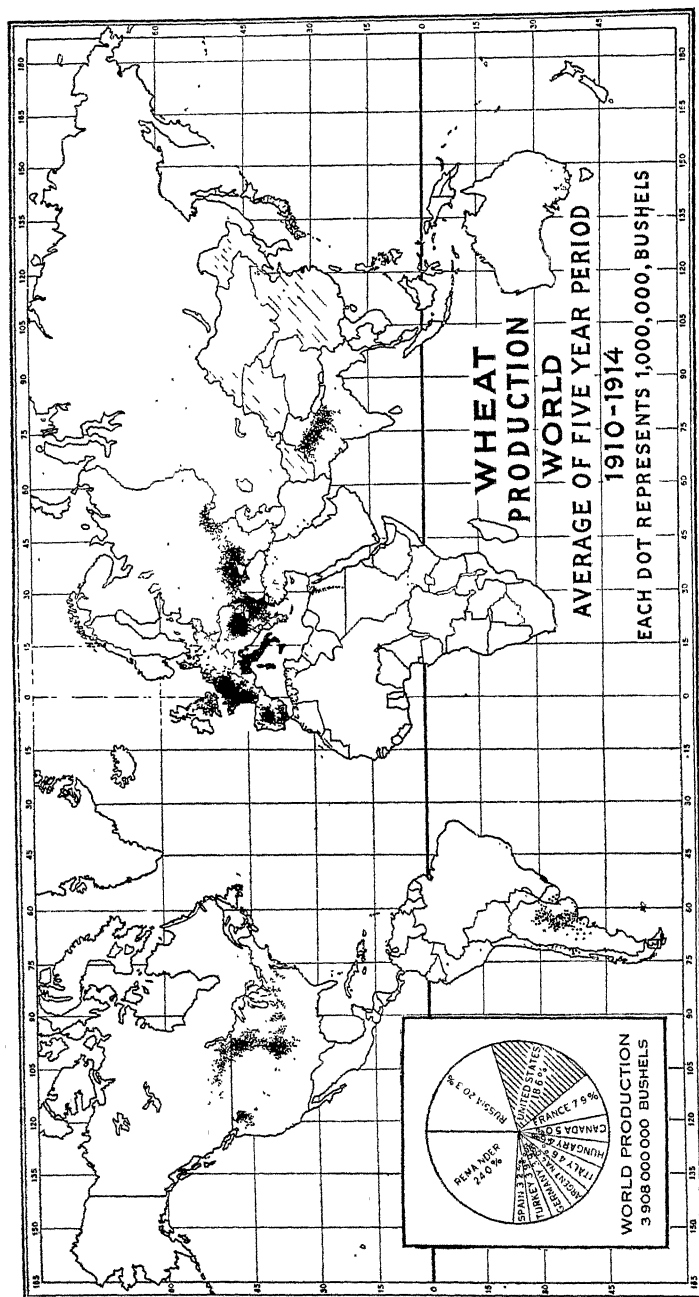


FIG. 3.—World wheat production before the war. Russia was then the greatest producer in the world and the United States was second. No satisfactory statistics of production since the war are available from some important producing countries. The North Temperate Zone produces most of the world wheat.

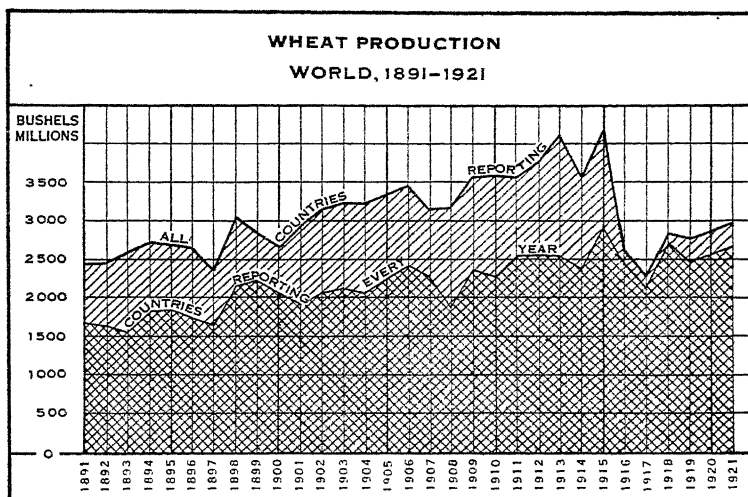


FIG. 4.—World wheat production in the 31 years 1891 to 1921 in all countries reporting. Since the beginning of the World War satisfactory statistics have not been available every year from Russia, Roumania, Bulgaria, Hungary, Austria, and Mexico. Note the steadily increasing production before the war.

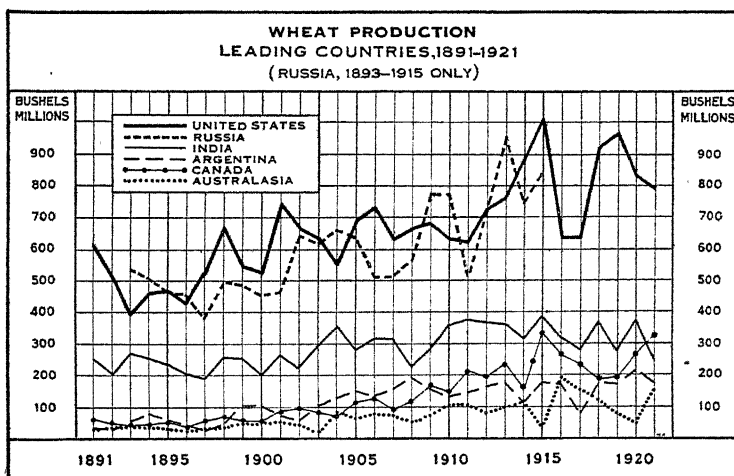


FIG. 5.—Wheat production in the 6 leading countries in the 31 years 1891 to 1921 (Russia 1893 to 1915). The United States and Russia were running a close race before the war. India was easily third until 1921, when Canada jumped into third place. Note the trend of production in each country.

more countries they are likely to be good in other countries, and consequently the world production does not fluctuate as much as production in any one of the important producing countries.

The trend of the world's wheat production is indicated in Figure 4. The trend of production in all the wheat-growing countries taken together was upward until 1915, after which several countries dropped out of the list reporting. The production of countries reporting every year in the period 1891-1921 has increased from about $1\frac{1}{2}$ billion bushels, average for the first three years, to over $2\frac{1}{2}$ billion bushels, average for the last three years.

There was a tendency to increase the production of wheat in all the important surplus-producing countries in the first 20 years of the period 1891-1921 (Fig. 5). Since 1904 the average production of India has not increased, and since 1908 the average production of Argentina has increased but little. The production of Canada continues to increase. War

conditions caused an abnormal expansion in production in the United States, reaching its highest point in 1915. It remains to be seen whether the United States will resume an up-

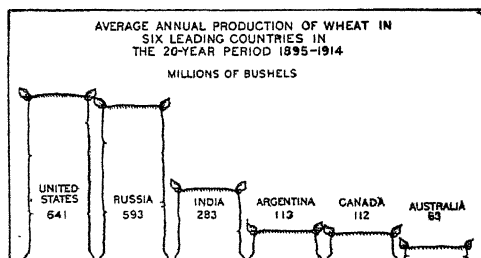


FIG. 6.—Popular presentation of Figure 5 on the wheat production in 6 leading countries.

ward trend in production after the normal trade relations have been restored. The trend of production in Russia was continuing upward at about the same rate as in the United States until 1915, the last year for which agricultural statistics are available. The wheat farmers in the United States have much reason to be interested in the prospect of the restoration of normal conditions in Russia and the future trend of production in that country, which is our greatest competitor in the wheat markets of the world (Figs. 5 and 6).

Wheat Production in the United States.**Trend of Production.**

The annual wheat production of the United States has more than trebled in the last 50 years, increasing from about 250 million bushels in the three years 1869-70-71 to over 750 millions in the three years 1919-20-21. As production is the resultant of both acreage harvested and acre yields, both must be examined to find the explanation of this enormous expansion in production (Fig. 7). Between 1870 and 1920 the acreage trebled. The yield per acre also has increased. The increase in production, therefore, has been due largely to expansion of area but partly to increase in acre yields.

As noted above, the increase in wheat production in the last 50 years has been due largely to increase in the area harvested. The increase has not been continuous and regular. Periods of expansion have been followed by a few years of little change or by a slight decline in acreage. Since 1866 there have been three periods of marked expansion, from 1873 to 1880, from 1890 to 1899, and from 1913 to 1919. Will 1921 to 1930 see a repetition of 1881 to 1890, and 1900 to 1910? Perhaps conditions have changed so that history will not repeat itself in this respect.

The rapid rise in acreage and production beginning in 1915 was due, of course, to the demand for wheat caused by the outbreak of the World War. There is a sharp break, however, in the ascending lines in 1916 and 1917. The small decrease in acreage in 1916 was due chiefly to the influence of the enormous production in 1915. The great reduction in production in 1916 was due in part to this reduced acreage but chiefly to the extremely destructive epidemic of black stem rust which occurred that year. The much greater reduction of acreage which occurred in 1917 was due almost wholly to the extraordinary amount of winterkilling, which destroyed 30 per cent of the large acreage of winter wheat which had been sown (Fig. 34). The high peak of acreage reached in 1919, after the war was over, was due partly to the fact that the war was still in progress when the winter

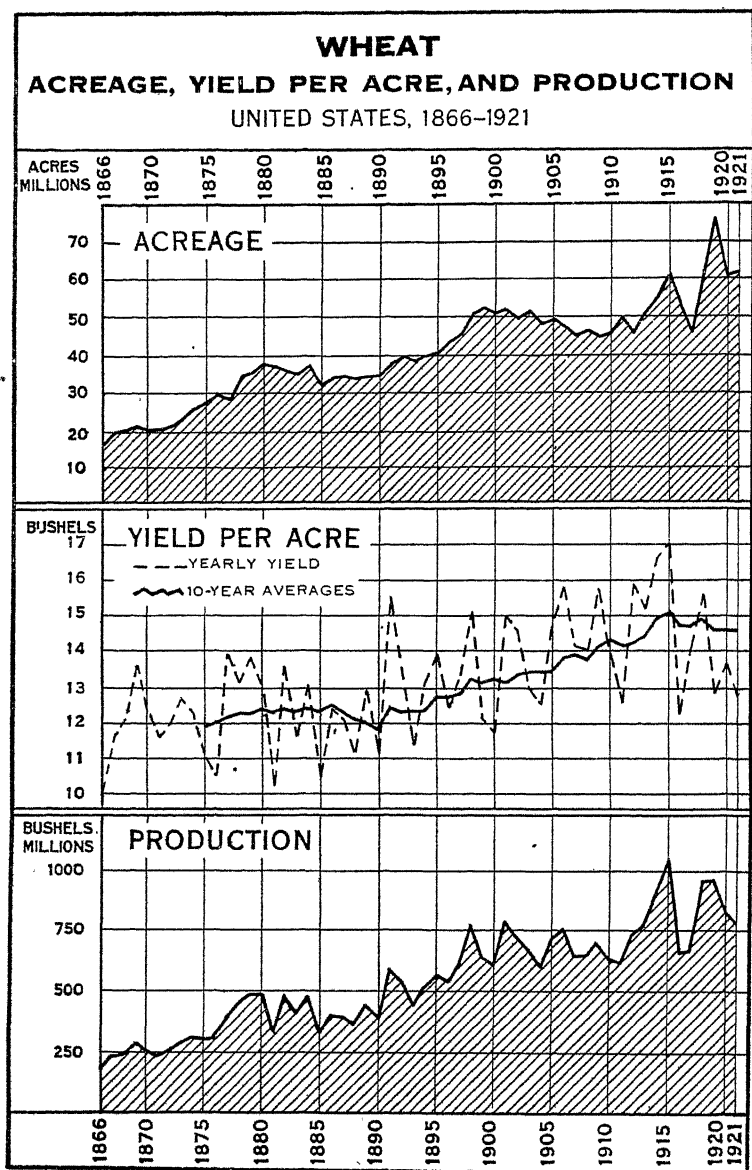


FIG. 7.—Annual acreage, acre yield, and production of wheat in the United States from 1866 to 1921. Estimates of acreage have been revised to accord with census returns. The solid line in yield per acre is a 10-year running average. Note that average yields increased about 3 bushels per acre from 1890 to 1915.

wheat was sown and partly to the attraction of the guaranteed price which was still in effect when the spring wheat was sown, resulting in the large increase in the acreage of both sowings. An explanation of the gradual and general changes in acreages that have occurred will be found in the discussion of the shifts in production, which follows.

In the last three years the acre yields of wheat have been below the average of the last 10 years. Production would have been much larger had the yields in these years equaled the average. The average of yields in the three years 1919-20-21 is only one-half of a bushel above the average of the three years 1869-70-71, but the average acre yield for the 10-year period ending in 1921 is $2\frac{1}{2}$ bushels above the average for the 10-year period ending in 1875. The trend of yields from 1880 to 1890 was downward, from 1890 to 1915 upward, and from 1915 to date again downward.

The increase in acre yields from 1890 to 1915 was due in part to the shifting of areas of production, expanding high-yielding and reducing low-yielding areas. In some parts of the country improved methods and more intensive cultivation increased yields. The downward trend since 1915 is due largely to adverse seasons, but in part to expansion of area to include low-yielding sections, and probably in part to less intensive culture.

Historical Development of Wheat Growing.

Wheat production began on the Atlantic Coast at least as early as 1618 in the Virginia Colony, and moved westward with the advance of settlement. The first great westward shift took place in the period 1783 to 1840. This was the canal-building period, the period of the development of western New York, and the settlement of the eastern Lake Region and the Ohio Valley.

The implements of production in this period were crude and not adapted to wheat growing on a large scale. Much of the seeding still was done by hand. The sickle (Fig. 8) and the cradle (Fig. 9) were used for harvesting, and the flail (Fig. 8) for thrashing. The reaper (Fig. 10) was in process of development, and came into use before the end of the period.

Wheat production, 1839.—The census of 1840 gives the wheat production of 1839 as shown in Figure 11. About half of the wheat was grown east and half west of the Allegheny Mountains. New York, Pennsylvania, Virginia, and Ohio produced 60 per cent of the Nation's wheat. The western frontier takes in parts of Wisconsin, Iowa, and Missouri. The eastern boundary of southern wheat production follows closely the fall line from Virginia south to central Georgia. The western wheat was carried eastward by the Great Lakes and the Erie Canal to New York, or southward by river to New Orleans.

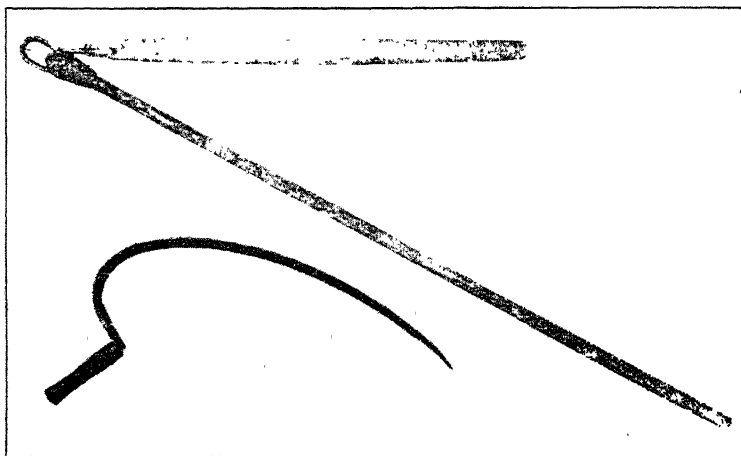


FIG. 8 The sickle and the flail, used for harvesting and threshing wheat until well into the nineteenth century.

Wheat production, 1849.—The total production increased but little in the decade 1839-1849 (Fig. 11). New York, Pennsylvania, Virginia, and Ohio remained the leading States. The crop increased largely in Michigan, Wisconsin, and Illinois and declined somewhat in the far East. A beginning had been made in Oregon, Utah, and New Mexico (not shown on the map). Lakes, rivers, and canals were still the important means of transportation, but railroads now extended from lake ports into the interior of two western States, one across southern Michigan, the other across central Ohio from Sandusky to Cincinnati.



FIG. 9.—The cradle, which followed the sickle as an implement for harvesting. It left the wheat in a windrow for the binders.

Wheat production, 1859.—This map (Fig. 12) shows the second great shift in wheat production. Illinois, Indiana, and Wisconsin have become the leading wheat-producing States. The States west of the Alleghenies increased their production from 49 to 119 million bushels, whereas east of the mountains production remained stationary. California and Texas appear on the map for the first time with large crops, California at once taking rank with the leading States. The low production in Ohio and New York in this

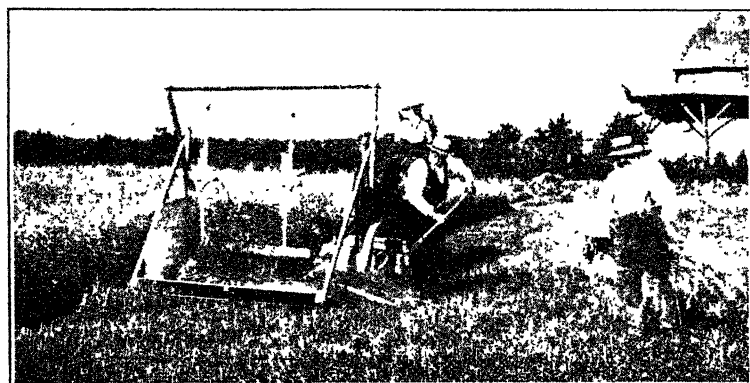


FIG. 10.—Early type of reaper developed about 1830. The grain was raked from the platform by hand. This machine evolved finally into the self-rake reaper still used in this country for harvesting flax and buckwheat.

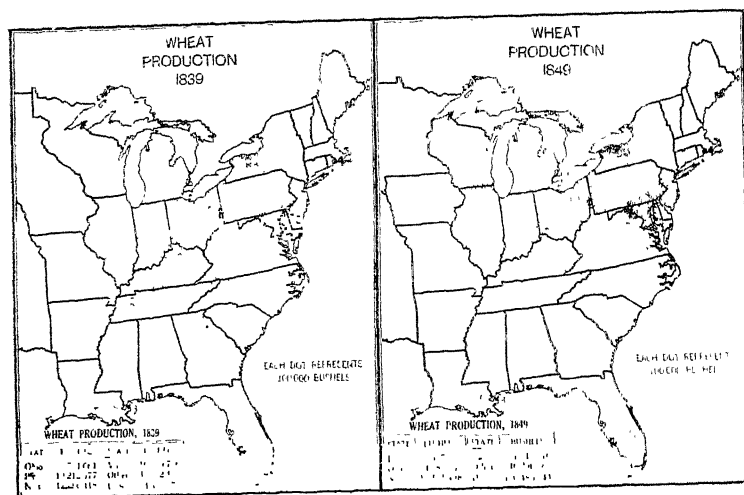


FIG. 11.—Wheat production in the United States in 1839 and 1849. The western frontier crosses the Mississippi River and ascends the Missouri. Transportation was eastward and southward by lake, canal, and river. Wheat growing began about 1838 in the Willamette Valley of western Oregon and increased rapidly after the discovery of gold in California. By 1849 a beginning had been made in Utah and New Mexico. Railroad transportation was extended to Michigan and Ohio and reaping machinery was in use.

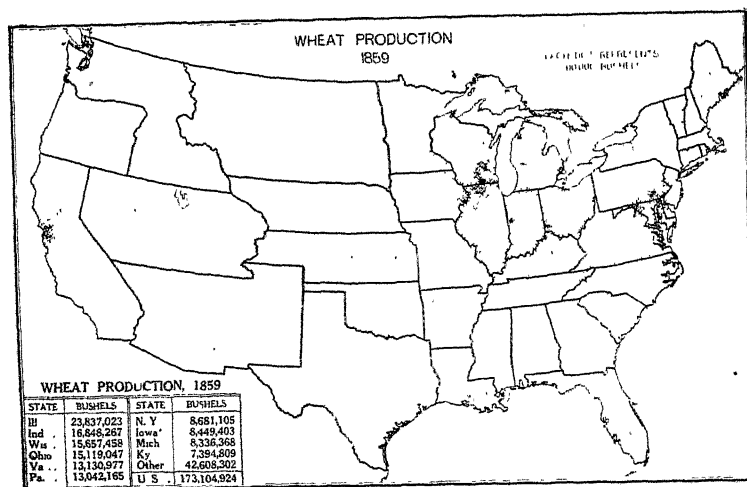


FIG. 12.—Wheat production in the United States in 1859. Wheat growing has advanced into Minnesota, Nebraska, Kansas, and Texas. Production areas appear in territory comprising what is now Arizona, New Mexico, Utah, and Idaho and larger areas in California and Oregon.

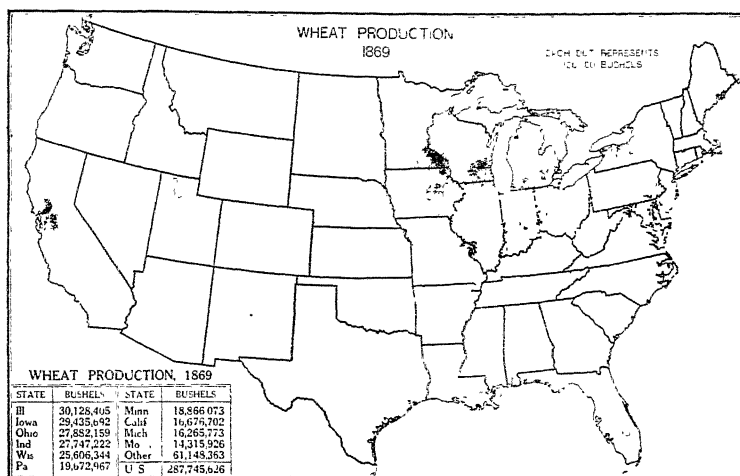


FIG. 13 - Wheat production in the United States in 1869. Production in the east-central States and California has increased enormously in the ten years. The frontier advanced but little onto the Great Plains. Small increases occur in the Rocky Mountains and Great Basin while dry-land production began in eastern Washington.

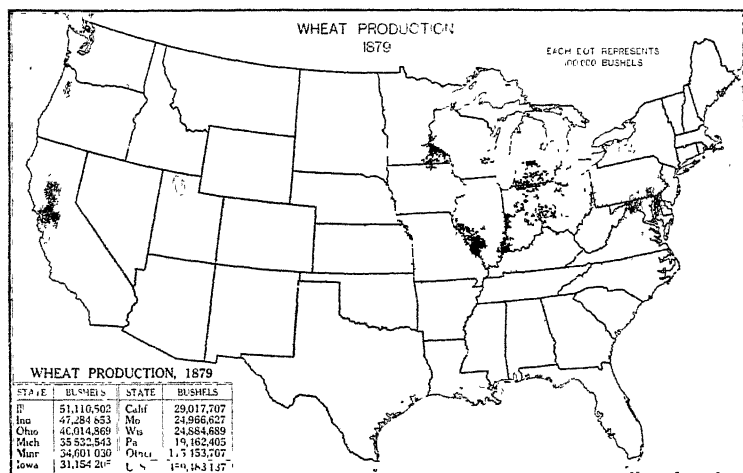


FIG. 14.—Wheat production in the United States in 1879. The frontier has moved steadily westward across the prairies with large production in Kansas and Nebraska. Dry-land production in California, Oregon, and Washington increased greatly. Production increased also in Minnesota, southwestern Illinois, Michigan, Indiana, and Ohio.



FIG. 15.—Three modern self-binders in operation. This invention made possible the great expansion of wheat production on the prairies and plains.

year is due to an unfavorable season. A network of railroads now covers the States of the Central West, drawing wheat from the farms in the hearts of these States.

Wheat production, 1869.—The States west of the Alleghenies almost doubled their production in the decade 1859–1869 (Fig. 13). The most significant feature is the great increase in production in the regions already occupied. The frontier advanced but little. Small beginnings had been made in Colorado, Montana, and eastern Washington. The first transcontinental railway was just completed and other roads had been extended into Kansas and Minnesota. Chicago and Milwaukee had become the great central markets of the near Northwest.

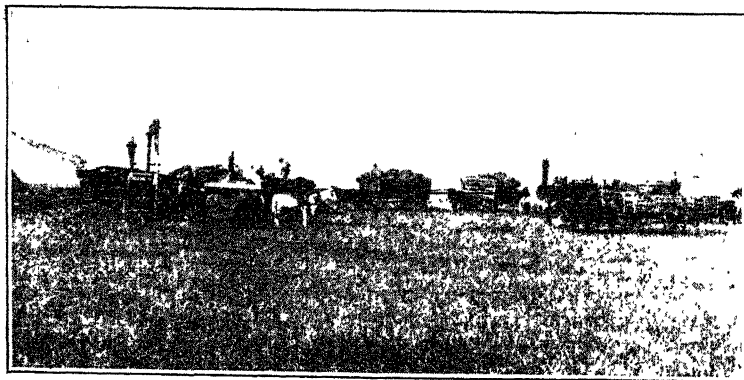


FIG. 16.—The modern grain separator, developed with the self-binder, thrashing wheat from the shock by steam power from a traction engine.

Wheat production, 1879.—While production still increases greatly in the States east of the Mississippi River, the wheat belt moves again steadily westward (Fig. 14). The frontier has now advanced into the Red River Valley, and the Kansas-Nebraska development has well begun, while northern Illinois, southern Wisconsin, and eastern Iowa are declining in production. Minnesota, southwestern Illinois, and a district including southern Michigan, western Ohio, and northern Indiana, have markedly increased their production. Dry-land production increased greatly in the Far West.

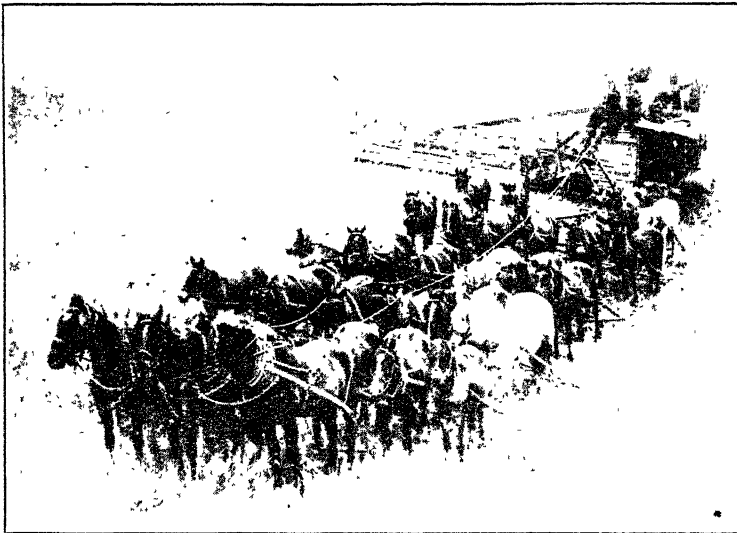


FIG. 17.—A large-sized combined harvester-thresher or "combine," drawn by 32 horses and cutting 30 to 40 acres daily. Smaller sizes are becoming popular and tractors often are used for power. These machines cut and thrash the grain at the same time. These and headers are used under dry-land conditions.

Both acreage and production nearly doubled in the 10-year period, 1870-79. This was due in part to the policy of homestead settlement of public land which followed the close of the Civil War, and partly to the development of machinery which made extensive production possible. The self-binder (Fig. 15), and the large separators driven by traction engines (Fig. 16), played important parts in this expansion of wheat growing. Later the giant combined harvester-threshers (Fig. 17) served the same purpose in the dry-land areas of the Far West.

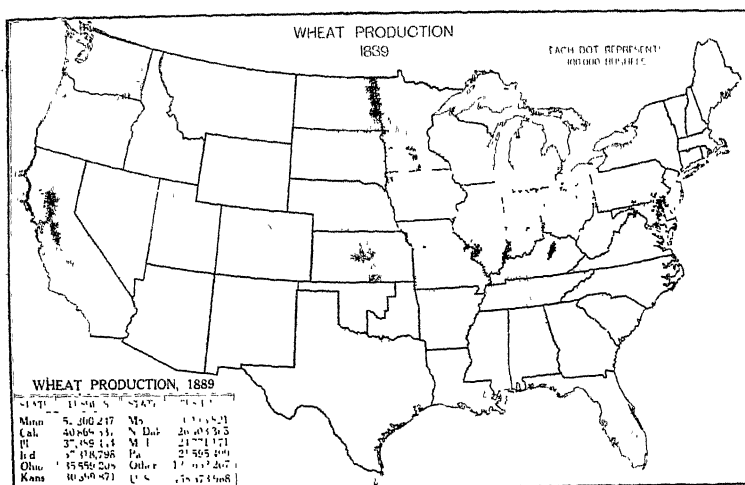


FIG. 18.—Wheat production in the United States in 1889. Production on the prairies and plains of Minnesota, the Dakotas, Nebraska, and Kansas greatly increased, as did also dry-land production in California, Oregon, and Washington. In the Mississippi Valley, except Missouri and southwestern Illinois, there was a marked decrease with a less marked decline eastward to the coast.

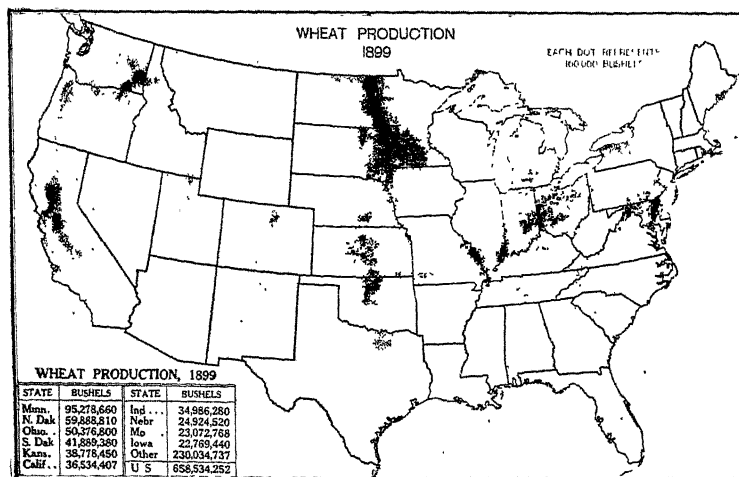


FIG. 19.—Wheat production in the United States in 1899. Enormous expansion of acreage is noted on the prairies in Minnesota and the eastern parts of the Dakotas and on the plains from the Dakotas south to Texas. Dry-land production in Idaho, Washington, and Oregon also is greatly increased. Little change occurs in the East, except in southwestern Illinois.

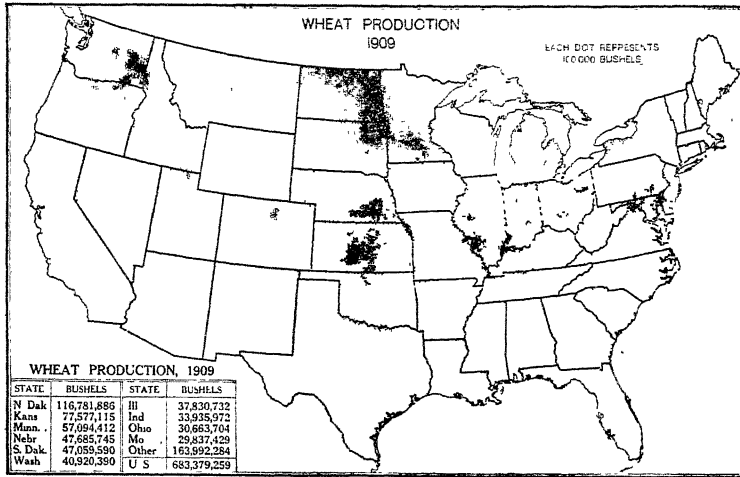


FIG. 20.—Wheat production in the United States in 1909. In the hard spring wheat district of the northern Great Plains area and the hard red winter wheat district of the central Great Plains area there is increased production and steady westward movement of production. There is a marked decline in California and some decline in the Ohio Valley.

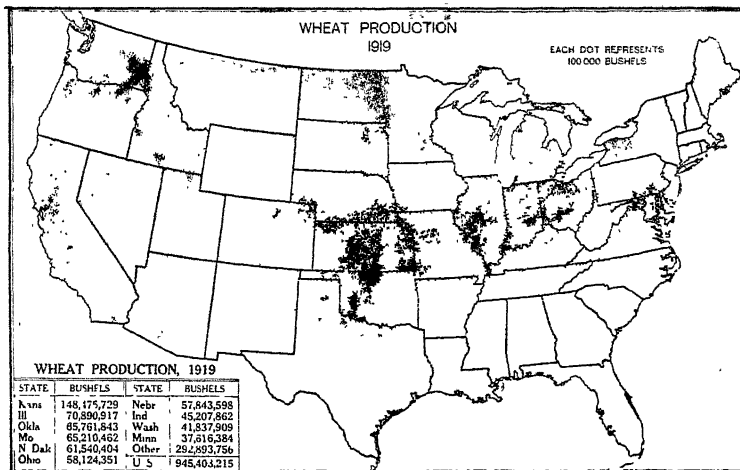


FIG. 21.—Wheat production in the United States in 1919. The stimulus of the World War on wheat production is markedly evident in this year. There was greatly increased production of soft red winter wheat in the central or corn-belt States and of hard red winter wheat in the central section of the Great Plains, but a decreased production of hard red spring wheat in the northern plains because of unfavorable conditions.

Wheat production, 1889.—This map (Fig. 18) reveals another remarkable shift in the wheat belt. The spring-wheat district of the northern Great Plains, the hard-winter-wheat district of central Kansas, and the dry-farmed districts of the Far West show a marked increase in acreage. The upper Mississippi Valley shows a decline just as marked. There also has been a slight decline in the East.

Wheat production, 1899.—The Red River Valley, the Kansas-Nebraska belt, and the Palouse district blacken (Fig. 19). Oklahoma, but recently opened to settlement, produces a large crop. Production in California is beginning to decline. Concentration and intense specialization in certain districts is evident. Minnesota and the Dakotas produce about 30 per cent of the Nation's crop of 658 million bushels. The Minnesota production is greater than that of the entire Nation in 1839, and the Dakota crop is greater than the Nation's crop of 1849.

Wheat production, 1909.—The great wheat belt of the Central West has shifted a little farther west upon the Great Plains (Fig. 20). Minnesota and western Iowa have declined somewhat and the crop of Oklahoma is short, but the crops of Kansas, Nebraska, and the Dakotas have more than doubled. There also has been a large increase in Montana, Idaho, and the eastern Oregon-Washington district. California continues to decline. In the East there is a notable increase in the production of western Illinois, but a decline in western Ohio.

Wheat production, 1919.—The full effect of the World War on wheat production was felt in this year (Fig. 21). The acreage harvested (73,099,421 acres) was 20 per cent greater than in any previous year. The production of 945 million bushels was larger than that of any previous year except 1915, the yield being reduced by unfavorable conditions, especially in June and July. Compared with 1909, the acreage increased 65 per cent, and the production about 40 per cent. Lessened production in the Dakotas and Minnesota was due to the very unfavorable season. In the Corn Belt, Kansas, Oklahoma, Texas, Colorado, and California, production increased very markedly. Kansas alone produced about 15 per cent of the total crop.

Cropping Systems.

Wheat usually is grown in rotation with other crops, except in certain dry areas where it is alternated with summer fallow. Growing wheat continuously results in depleted fertility and poor physical condition of the soil, increased growth of weeds, accumulation of destructive plant diseases in the soil, and lowered yields of poorer quality. Cost of production also may be increased.

Local conditions determine the rotation and the crops used. A good system for sections having a humid climate should include a legume and a cultivated crop. Cultivation keeps weeds in check and has a beneficial effect upon the soil. Usually the land does not have to be plowed after a cultivated crop, thus reducing the cost of sowing wheat. Legumes add nitrogen and help to maintain the supply of humus. As a rule legumes and grasses are not used in rotations in the Great Plains and other dry-farmed areas because of the difficulty of growing them and of rotting them in the dry soil.

The areas where wheat is now grown in the United States, and the development of the wheat-growing industry in these areas, have been shown in the preceding maps. The relative importance of wheat in these areas and the cropping systems used on the farms where wheat is grown will now be considered. In Figure 22 the solid black spots indicate those areas where wheat occupied 80 per cent or more of the acreage of land in crops in 1919. Decreasing percentages are indicated by gradually lighter shadings.

The areas containing a high percentage of wheat (solid black in Fig. 22) are seen to be the same, in a general way, as the areas of large wheat production, shown by the dots in Figure 21. On careful study it is seen, however, that the percentage of wheat in the total of all crops is higher in certain areas, as, for instance, in Montana, than the frequency of dots in Figure 21 would lead one to expect. This is because few other crops are grown, on account of climatic or other limiting factors, leaving only wheat to occupy the land.

The choice made by farmers in different areas between the different small-grain crops is shown in Figure 23. The map shows the first and second choices in 1919, as indicated

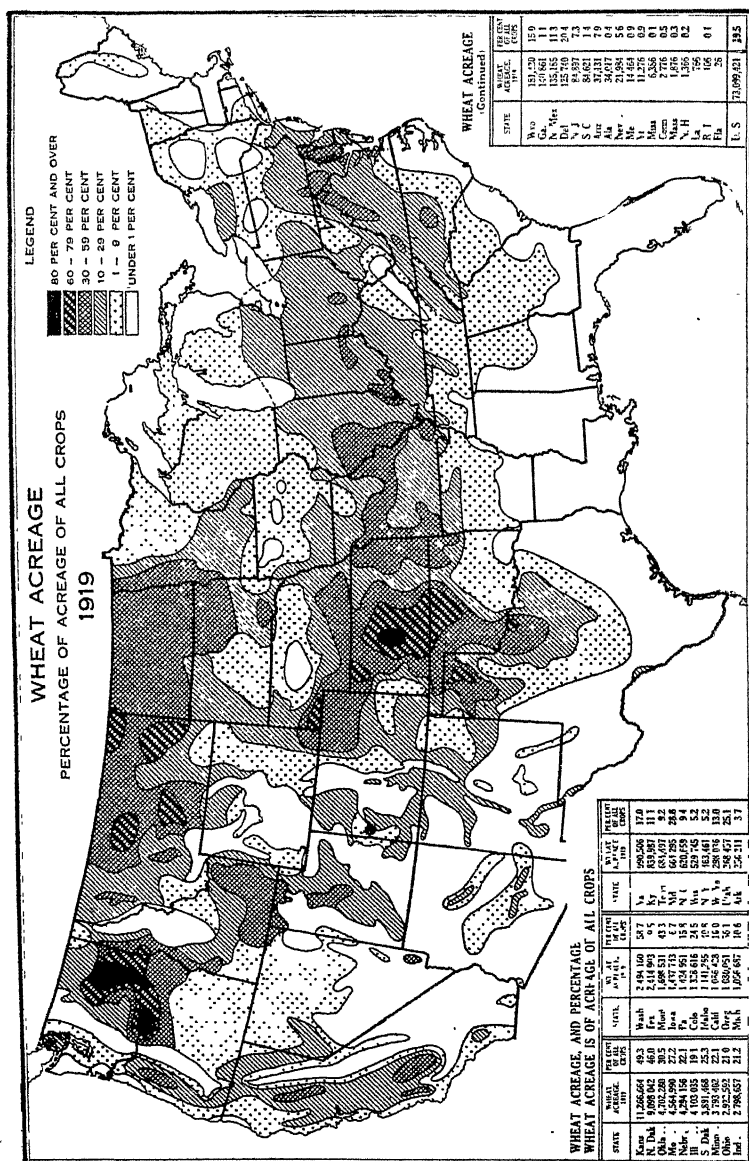


FIG. 22.—Wheat occupies 80 per cent or more of the crop land in parts of central western Kansas and eastern Oregon and Washington, and more than 60 per cent in larger portions of the same States and of Montana, Nebraska, Oklahoma, and Texas.

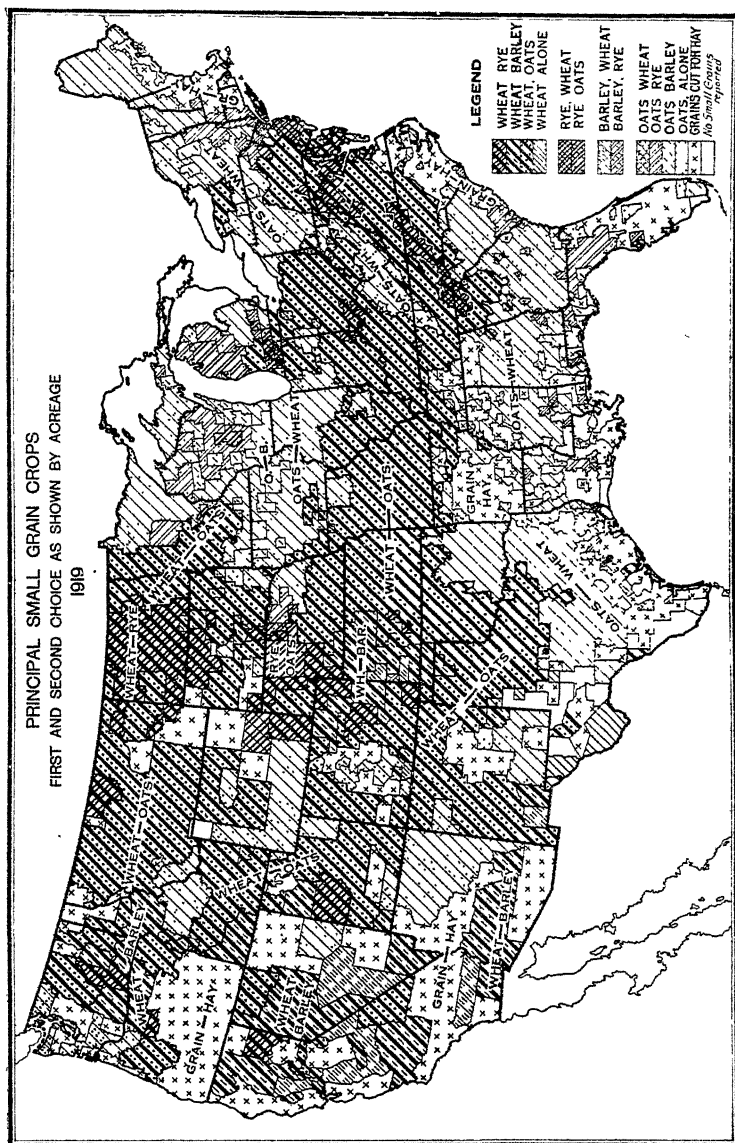


FIG. 23.—In most of the wheat-growing regions of the United States wheat leads in acreage with oats second. In the Dakotas and part of Montana rye stands second. Oats leads wheat in the South, in New England, in the northern Corn Belt, and under irrigation in some parts of the Rocky Mountain region.

by the acreage of the two most important small-grain crops. The crop with the largest acreage in any area is named first, followed by the crop next in importance. The choice of crops thus shown is the result of the interaction of all the various climatic, biologic, and economic factors affecting production on the farm. Some of these factors will now be discussed more fully.

The effect of climate on the distribution of different crops, and different kinds or classes of each crop, is very important. The distribution of winter wheat and spring wheat, for example, is shown in Figures 24 and 25. Winter wheat is grown south of the spring wheat area, except in certain areas where either type may be grown. Winter wheat almost always is preferred where winter conditions permit it to be grown, as it usually gives a higher yield and does not compete so much with spring-sown crops for labor as does spring wheat. In a locality growing both types the winter wheat is ready to harvest earlier than is spring wheat, thus extending the harvest season and allowing a better utilization of labor.

The different characteristics of different crops enable the farmer to utilize his labor to the best advantage and avoid the employment of much extra labor. In the spring-wheat belt, for instance, wheat is sown first in the spring, early sowing being very advantageous to this crop. After wheat comes the seeding of oats and barley, and in some localities, flax or corn. The harvest of barley comes first, followed by that of wheat and oats. Rye finds a place in the agriculture of the spring-wheat belt when prices are attractive. This crop, being fall-sown, gives a better distribution of labor than with spring-sown crops alone.

Not only does the adaptation of crops to different areas determine what ones are grown in any particular place, but among the adapted crops their relative profitableness is a factor of importance. The principal crops competing with spring wheat are oats (Fig. 26), barley (Fig. 27), and, to some extent, winter rye (Fig. 28) and corn (Fig. 29), while those competing with winter wheat are principally oats and corn. Oats can be grown over all the area where wheat is adapted, barley over the area suited to spring wheat, and corn over a large part of the winter-wheat area and a small part of the spring-wheat area. (See Figs. 30, 31, and 32.)

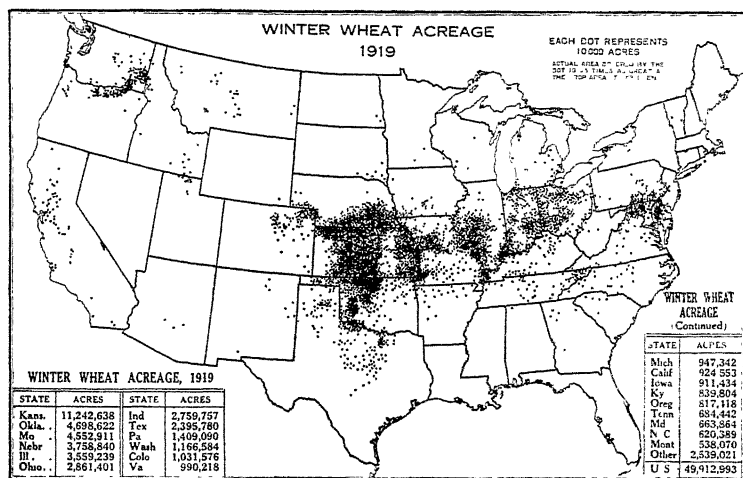


FIG. 24.—Nearly all of the winter wheat is grown between latitude 35 and latitude 41, except in the Pacific Northwest, where the climate is milder. The northern frontier of winter wheat follows in a general way the mean winter temperature line of 20° F., which extends in a northwesterly direction from southern Wisconsin and northern Iowa diagonally across South Dakota and Montana.

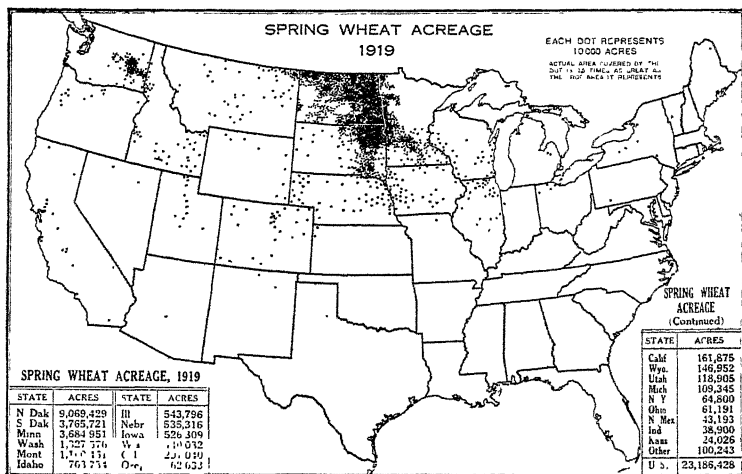


FIG. 25.—Practically all of the spring wheat is grown from latitude 43 northward, the boundary of the area crossing our boundary at latitude 49 and extending far into Canada. Spring wheat lies north of corn and winter wheat. The northern limit of spring wheat is approximately the mean summer temperature of 58° F., which is found in the United States only in the western mountains.

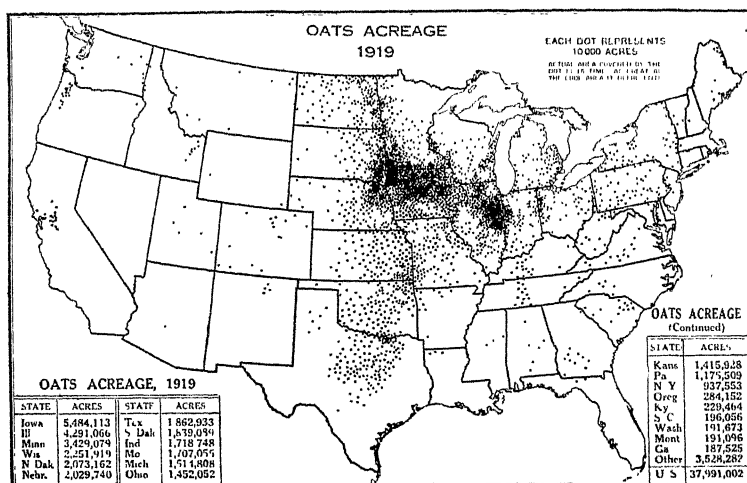


FIG. 26.—The oat crop is less subject to disease than wheat and can be grown under a wider range of environing conditions. Winter varieties are grown only in the South. Spring oats on wheat farms permit better distribution of labor in seeding and harvest. Concentrated production is adjacent to great central markets and between the winter and spring wheat belts.

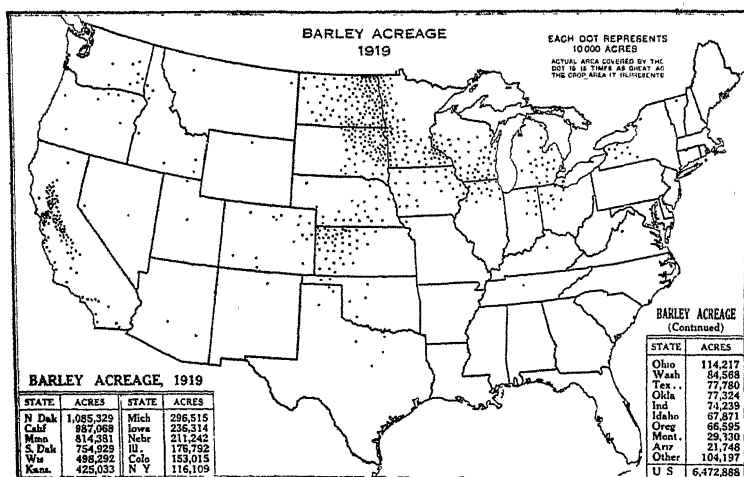


FIG. 27.—Spring barley is well adapted in the spring-wheat belt. It can be sown later and harvested earlier than spring wheat or oats and provides feed grain for stock. A little winter barley is grown in the South.

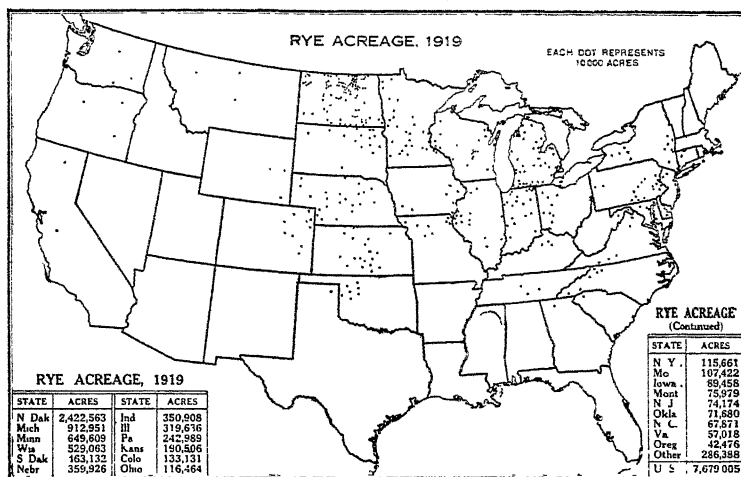


FIG. 28.—Rye is practically all fall sown. It competes successfully with winter wheat on poor soils, and with spring wheat because it permits a better distribution of labor throughout the year. This explains its extensive production in North Dakota, where spring wheat is the dominant crop, and winter wheat can not be grown.

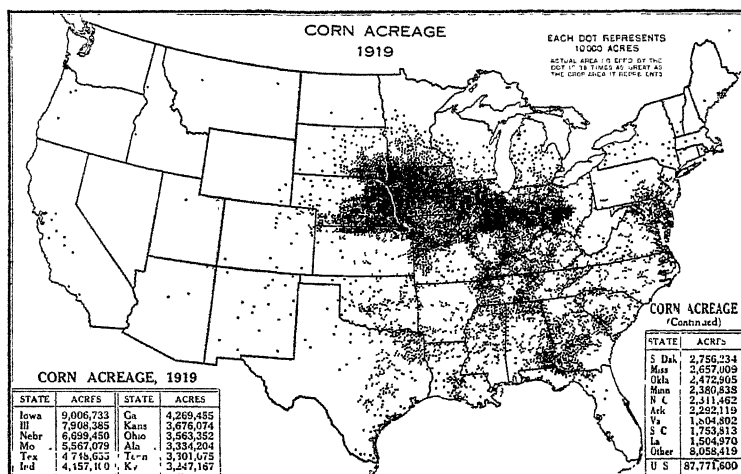


FIG. 29.—Corn is widely grown under warm humid and semiarid conditions. Concentrated production in the corn belt is the basis of hog and cattle feeding. As a late-sown tilled crop, wherever grown, it enables weed control, better rotations, diversified farming, including stock raising, and better seasonal labor distribution. It also is the dominant silage crop for dairy and beef production.

Organization for Profitable Production.

Most of the wheat farming in this country lies between the Corn Belt and the ranching regions of the West. The reactions which occur between these general classes of farming lead many observers to look upon corn farming as encroaching upon wheat farming and to look upon wheat farming as encroaching on the ranching area. The relative profitableness of the different crops which are grown in any given place at any given time is influenced by a wide range of conditions.

The present yields of wheat in Iowa, for instance, are good. If wheat paid better than corn under conditions such as prevail in Iowa (Fig. 30), farmers there would center their business on wheat rather than on corn as at present. Much of the world, however, is well suited to wheat production, while relatively only a small part of it is well suited to corn production. It hardly can be expected, therefore, that the price of wheat through any considerable period of time will remain so high in relation to the price of corn as to make wheat a more profitable crop than corn under the best of Corn Belt conditions.

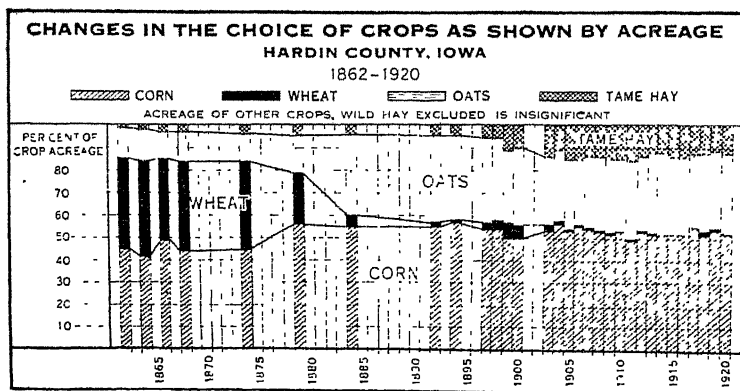


FIG. 30.—In the 10 years from 1875 to 1885 wheat nearly disappeared from Hardin County, Iowa, being replaced chiefly by oats, which in turn was partly replaced by hay as dairying increased. Wheat and oats are much alike in their requirements throughout the season, and competition between them usually is strong. In the past 40 years the purchasing power of oats, in terms of wheat, has increased rather steadily in Iowa. This change in relative prices, carrying weight in a complex of factors, helped oats to supplant wheat.

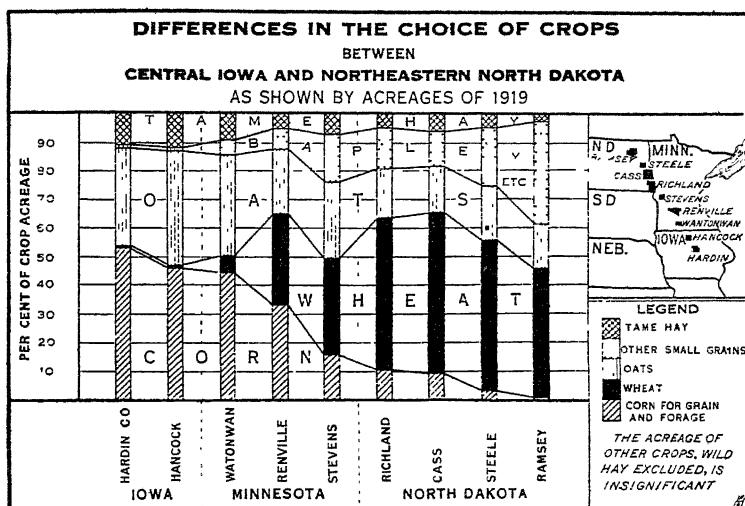


FIG. 31.—In a cross section of the spring-wheat belt, northwestward from north central Iowa to northeastern North Dakota, the proportion of wheat rapidly increases, largely replacing corn, which almost vanishes because of increasing climatic handicaps. The proportion of oats and tame hay slowly decreases, and the proportion of other small grain, principally barley and flax, increases.

There are many other factors which govern the proportionate acreage of different crops in any given section (Figs. 31 and 32). One of the most important factors is the economical distribution of labor on the farm throughout the year. In considering competition between crops for land, therefore, we must not overlook the fact that the farmer in adjusting his business weighs the different possible uses and requirements of labor (man labor) and equipment (horses, cattle, machinery, fences, etc.) with the different possible uses and requirements of land. Thus, even though he is situated where wheat is the one single crop which pays best, he is not likely to grow wheat alone, because usually the profitableness of the farm as a whole will be increased by producing some other crop for sale or for home use.

He gives a share to corn or to some other tilled crop, partly because rotation with a tilled crop is desirable to clean the land of weeds and partly because it utilizes labor and equipment to better advantage in handling the crops and also favors live-stock production. Likewise he gives a share to other cereals or to hay crops, which can be grown,

harvested, fed, and marketed, for the most part, without seriously interfering with giving attention to wheat, and a share to native or to tame pasture for live stock which will utilize hay and other feeds during the winter.

Just as farmers in a wheat area usually can gain by allotting a share of wheat land to crops that will give a return on

labor and equipment at times when wheat is not demanding attention, so farmers in the Corn Belt usually can gain by allotting a share of corn land to small grain, hay, and pasture which will give a return on labor and equipment at times when corn is not demanding attention (Figs. 30, 31, and 32).

So, whether the farmer is choosing wheat as a main crop or as a subordinate crop, he chooses it on the basis of how profitable it is in relation to other crops, from the standpoint of the use of labor and equipment as well as land, in one year

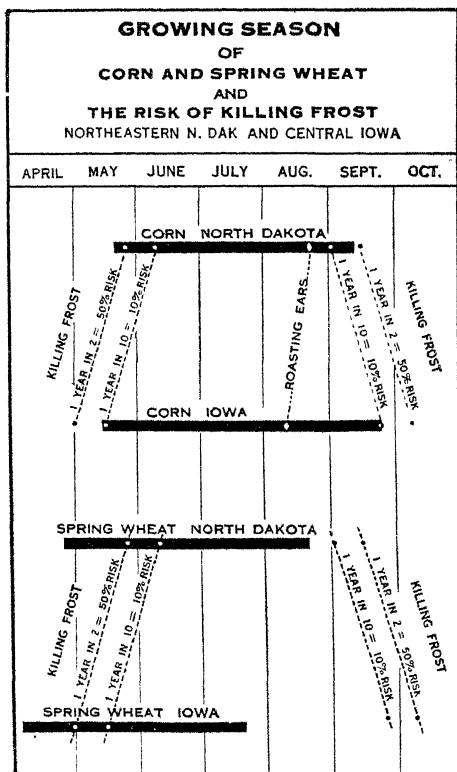


FIG. 32.—Northward from central Iowa to northeastern North Dakota early fall frosts become a greater and greater handicap to corn but not to wheat, and they are the largest single factor in decreasing corn acreage.

or in several years. Regardless of how important or how unimportant wheat may be in his business, his aim is to press it at the expense of other things only so far as he believes it will pay best.

Natural Factors Influencing Production.

The production of wheat in any year is the result of the interaction of many factors in nature, some favorable, others unfavorable. The most important of these are the climatic conditions. Too much or too little moisture, and the occurrence of frost and freezing temperatures, hail, hot winds, and storms take their toll from the wheat crop. Fungous diseases and insects and animal pests exact further tribute.

Moisture.—The dependence of the wheat crop on precipitation, that is, on rain and snow, is realized when it is remembered that the great wheat-producing areas of the country

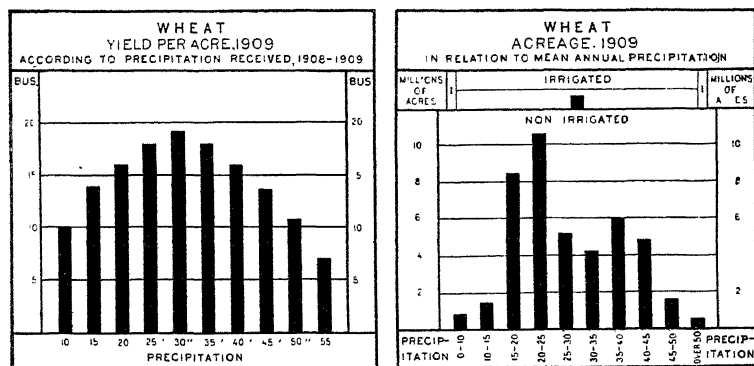


FIG. 33.—In 1909 wheat yields increased with precipitation since the previous crop, until 30 inches had been received, after which there was a gradual decrease in acre yield with increasing rainfall. In the same year nearly one-half of the wheat acreage was in areas having a mean annual precipitation of 15 to 25 inches.

are in the drier portions. In 1909 it was determined (Fig. 33) that over 60 per cent of the wheat acreage and production of the United States was in regions (nonirrigated) having less than 30 inches of annual precipitation. It also was determined that largest yields were harvested in that year in regions where the precipitation was 30 to 35 inches, with lower yields where precipitation was either more or less. The size of the wheat crop, then, must depend every year to a very large extent on the precipitation, as usually this is the limiting factor.

Fortunately, not all parts of the country are liable to extensive damage in any one year. Dry weather often is

prevalent over large areas, but it has never been sufficiently widespread to reduce the wheat production of the country as a whole to conditions of famine, as was the experience in Russia in 1921.

Winter-killing.—Some of the winter wheat acreage sown in the fall always is abandoned the next spring. This is due to several unfavorable weather conditions during fall and winter, such as fall drought, intense cold, winter drought, soil blowing, ice sheets, etc., collectively known as winterkilling. The percentage of the acreage sown that was abandoned in the different years from 1900 to 1921, inclusive, is shown in Figure 34. The largest abandonment was 31 per cent in 1917, after very unfavorable winter conditions, and the smallest was 1.1 per cent in 1919. The average for this period is about 10 per cent.

Insects.—Severe losses of wheat are caused each year by insects. Most important of these are Hessian fly, chinch bug, joint worm, grasshopper, and green bug. The average losses due to these pests have been estimated at more than 2 per cent of the crop, or nearly 18 million bushels each year. The Hessian fly is responsible for more than half of this loss.

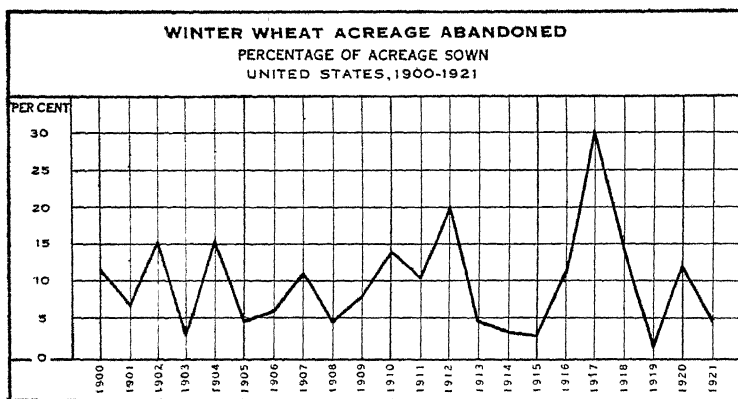


FIG. 34.—Every spring a considerable acreage of winter wheat sown in the previous autumn is abandoned because of winter injury from various causes. The average abandonment is about 10 per cent, but occasionally it is much larger, rising to 20 per cent in 1912 and 31 per cent in 1917.

The area infested by the Hessian fly is shown in Figure 35, together with best dates for seeding wheat to escape injury.

Chinch bugs are very destructive in some years in the central part of the country, and farmers often are put to great expense in fighting them. The joint worm is a serious pest, principally in the States north of the Ohio River.

Grasshoppers, in the spring-wheat area and in Kansas, sometimes are very destructive, especially in dry years. In Texas, Oklahoma, and Kansas the green bug occurs in destructive numbers in certain favorable years and causes considerable losses, but, on the average, such losses are not more than 5 per cent of those caused by Hessian fly.



FIG. 35.—In the area infested by Hessian fly, wheat seeding must be delayed until the adult flies have died or severe injury may result. This fly-free date may be later than the most favorable date for seeding wheat from other viewpoints.

Fungous diseases.—Wheat is subject to many fungous diseases, chief among which are stem rust, leaf rust, stripe rust, bunt or stinking smut, loose smut, and scab. Of these, stem rust, bunt, and scab are of greatest economic importance and are widely distributed throughout the chief wheat-producing areas. Estimates of losses, in bushels, caused by these three diseases, made in the four years from 1918 to 1921, inclusive, are as follows:

Disease.	1918	1919	1920	1921
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
Stem rust.....	804,000	71,417,000	54,903,000	22,800,000
Bunt.....	19,063,000	10,219,000	14,088,000	10,500,000
Scab.....	3,936,000	59,680,000	11,724,000	10,000,000
Total.....	23,803,000	141,316,000	80,715,000	43,300,000

In severe epidemics the losses caused by stem rust alone sometimes amount to more than those caused by all other diseases combined. In 1916, this rust destroyed approximately 180,000,000 bushels of hard red spring wheat in the United States and about 100,000,000 bushels in the Prairie Provinces of Canada. In Denmark, stem rust has been effectively controlled by eradicating the common barberry, which carries one stage of this rust. The United States Department of Agriculture and 13 North-central States are now cooperating in a campaign to eradicate this barberry in those States.

Of these three diseases, bunt is the only one that can be controlled by seed treatment. Formaldehyde and copper sulphate (blue vitriol) are now widely used for the prevention of bunt. In the Pacific Coast States, where so much injury has been caused by formaldehyde, the blue vitriol-lime method is used, the seed being dipped in milk of lime immediately after treatment.

Scab is a widely distributed disease of wheat, which frequently attacks barley and rye also. It is particularly abundant in the Corn Belt. It is caused by the same fungus (*Gibberella sarbineti*) that causes much of the root, stalk, and ear rot in corn. This disease usually is more destructive in sections where wheat follows corn in the rotation. Effective methods for the control of scab have not yet been discovered.

Cost of Production.

The farmer is concerned first of all with the efficient production of crops and live stock. This purpose may most readily be attained by studying the production costs of the various crop and live-stock enterprises which make up his farm business. A knowledge of the separate factors which make up the total cost of farm enterprises is necessary in order to know where and to what extent efficiency in production may be introduced. Knowing the relative costs and profits of the several farm enterprises, the farmer is in position to select the most profitable ones, thereby increasing the total net profits of the farm. A study of production costs, in addition to supplying information for the introduction of more efficient methods and for the basis of enterprise selection, also serves the useful purpose of comparing the production cost with market prices, such comparisons being necessary if the farmer is to be alert in adjusting the supply to the demands of the market. Areas in which studies have been made are shown in Figure 36.

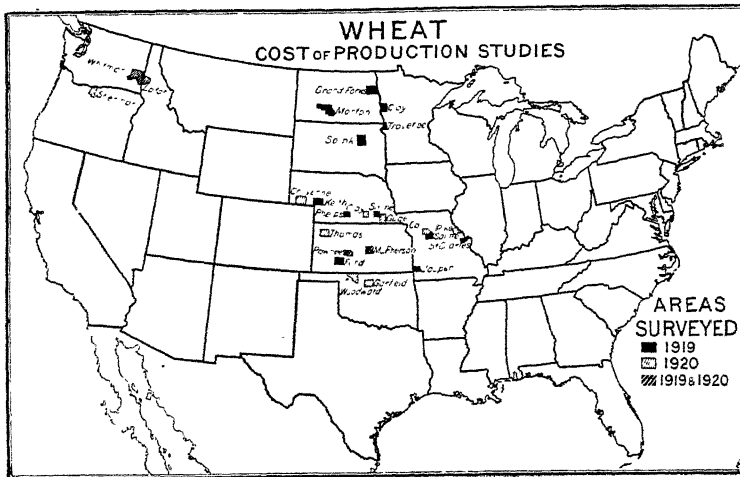


FIG. 36.—Studies of the cost of producing wheat on representative farms were made by the Office of Farm Management and Farm Economics for the crops of 1919 and 1920 in the counties shown on this map. The results of the study of the 1919 crop are used as a basis for this discussion. For complete report see Department Bulletin 943. Write the department for results of 1920 study.

Variations in Cost of Production.

There are very few farms on which wheat is produced where the conditions are exactly alike throughout. The different possible combinations of variable factors are almost infinite in number, and there is a wide range in the cost per acre and the cost per bushel (Fig. 37). This means that whatever figure is decided upon as "the cost of producing wheat," most of the farms produce at some other figure, some below and some above. No further argument than the great variety of different costs on different farms should be required to prove that the price of wheat is not influenced by the cost of producing wheat, except in a remote way and only as the result of a series of adjustments. The farmers' interest, therefore, is in the *cost of production for his farm*, its relation to the market price offered to *him*, the interrelations of the several factors of cost *on his farm*, whether he can afford to produce wheat at the probable price, and how and where *he* can cut *his* expenses or increase *his* returns.

The actual figure determined upon, to represent the average cost of production, is of use, in *connection with other statistics*, for guiding judgment as to production and marketing, adjustments being indicated to producers and to consumers through price. If the supply is large the price will be low, and producers will tend to produce less wheat the next year. Any call for more wheat must be made with a promise of a higher price. The actual cost figure arrived at is not so important, either to consumer or producer, as the measurement of the conditions which determine the figure and an understanding of the trend of changes in cost factors and in prices, and their effect, combined, upon production.

It obviously is impossible for any agency to determine the cost of producing wheat for every farm on which wheat is produced. It is quite possible, however, to study the cost of producing wheat on a number of representative farms in important producing sections where different conditions prevail, with confidence that the data so obtained will approximate very closely the results which a study of every farm would reveal. Sufficient variations of conditions are brought to attention in this way to enable each producer to estimate his own cost of production with a minimum of

effort by the very simple process of comparing notes on his own farm operations with those of the tables and charts published in reports.

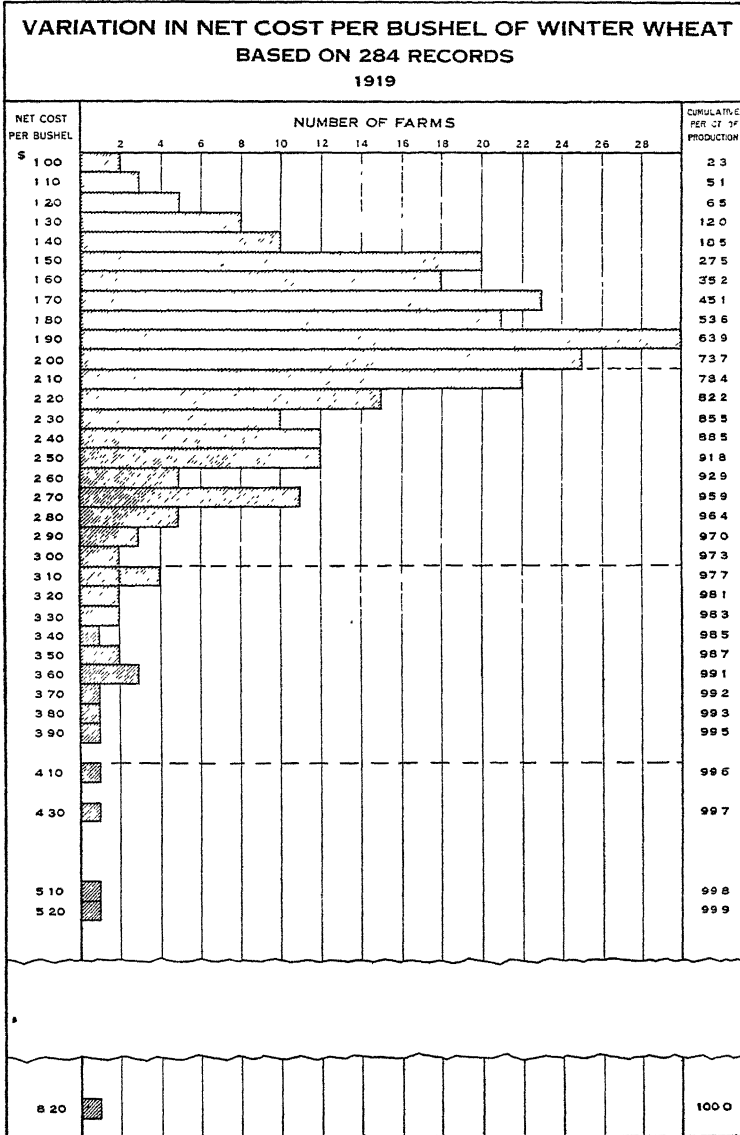


FIG. 37.—Note the wide variation in the net cost per bushel in 1919. The average cost per bushel on these 284 farms was \$1.87. About three-fourths of the farmers of whom records were taken produced wheat at a cost of \$2 and less.

Regional Variation in Cost of Production.

Next to the wide variation in net cost per bushel, the outstanding fact is that high cost per acre does not necessarily mean high cost per bushel. In fact if we know only the cost per acre we know very little about the cost of a bushel of wheat. This fact is illustrated graphically in Figure 38. The average cost per acre of producing winter wheat in Saline County, Nebr., was just twice as high in 1919 as the cost of growing an acre of spring wheat in Morton County, N. Dak., but the net cost per bushel of the winter wheat in Saline County, Nebr., was only 6 cents more than half the cost of a bushel of the spring wheat in Morton County. Similar differences, even though not so marked, may be observed in acre and bushel costs of other areas.

The dominant factor is acre yield. The average yield of spring wheat in Morton County, N. Dak., in 1919 was 4.4 bushels per acre, while in Saline County, Nebr., the yield of winter wheat was 18.1 bushels per acre. Neighboring farms with about the same cost per acre may show very

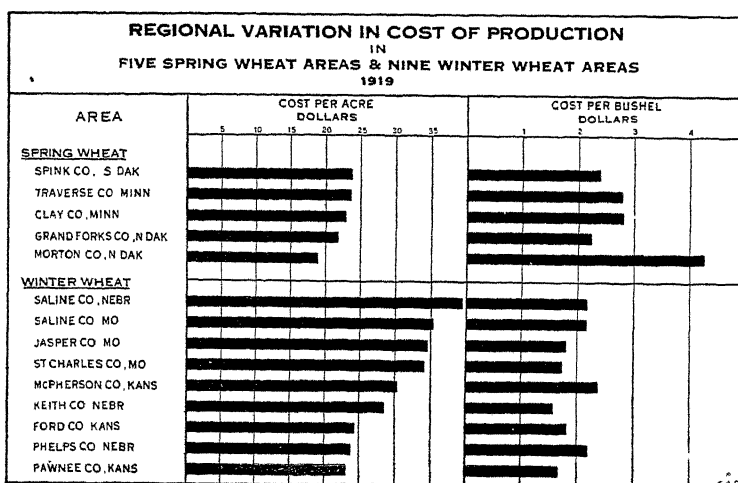


FIG. 38.—Note low cost per acre but high cost per bushel in Morton County, N. Dak., and high cost per acre but low cost per bushel in Saline County, Nebr. Yield per acre is an important factor in cost per bushel.

different costs per bushel. Take for instance two farms in Morton County, N. Dak., each harvesting 100 acres of spring wheat, and by no means extreme cases for the season. On one of these farms with a yield of 5 bushels per acre, the acre cost was \$21.31, and the bushel cost \$4.30. On the other farm with a yield of 2.9 bushels and a lower acre cost of \$19.97, the cost per bushel was \$6.79.

Regional Variation in Cost Factors.

As products are sold by the unit, every effort must be made to cut the cost of the unit to the lowest possible figure, irrespective of the acre costs. In the case of wheat, it is particularly necessary to control the unit costs because yield is so much a matter of seasonal variation. All that can be done toward making ends meet is to cut the acre costs to a figure such that over a period of years the returns will be favorable. To do this, one must know from experience what yield one may expect from one's own farm, and keep the acre cost within the figure which, divided by the yield, will give a bushel cost below the selling price. This is much easier said than done, it is true, but with careful attention to the details of sound management, much can be done to reduce the risk of loss and to increase the chances of profit.

The average cost per acre, distributed into six classes of expense, as noted for the 1919 crop, is shown by counties in Figure 39, arranged in descending order of total cost per acre for the five spring wheat areas and for the nine winter wheat areas. The length of the bars is proportional to the average cost for all the farms in each area. The numbers in the columns to the left of the bars show the number of hours of labor used per acre on those farms using horses only; 121 farms using tractors or motor trucks were omitted in figuring the hours of man and horse labor used.

There is wide variation in the amount of labor required per acre, both as between areas and as between different farms in the same area, and some difference in the cost per hour. In the spring-wheat areas the largest number of farms required from 6 to 10 hours of man labor and from

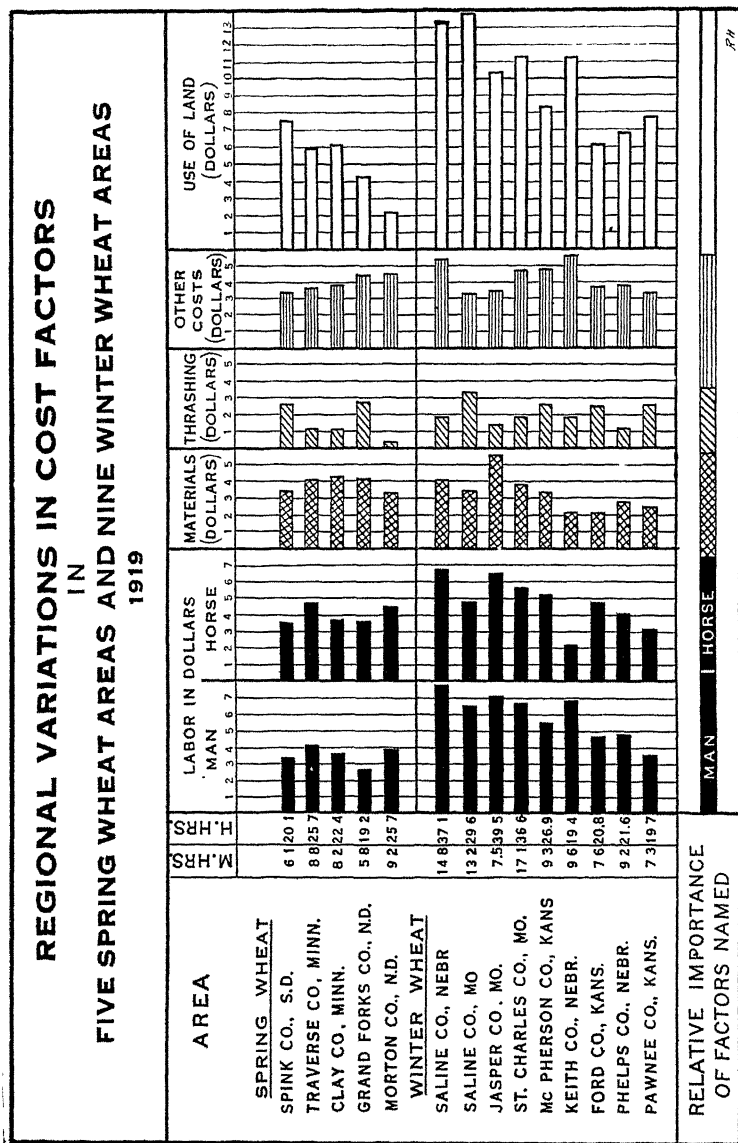


FIG. 39.—The counties in each group are arranged in descending order of total costs per acre. Note the wide variation in the costs of the several factors. For example, the average cost of man labor on an acre in 1919 varied from \$2.50 in Grand Forks County, N. Dak., to over \$7.50 in Saline County, Nebr.

20 to 26 hours of horse labor. The cost per hour was 35 cents for man labor and 20 for horse labor, except during the harvesting and marketing season, when a rate of 60 cents an hour for man labor prevailed. The lowest labor requirements were 3.6 man hours and 13.4 horse hours on one farm. The highest was 19.1 man hours and 45.8 horse hours, also on one farm.

In the winter-wheat areas seven farmers produced the crop with 5.4 hours of man labor and 15.9 horse hours. On the other end of the scale two farms with a small acreage spent 27.4 man hours and 61.6 horse hours on the acre. Two thirds of the acreage was worked with 10 hours or less of man labor and an average of less than 23 horse hours. The prevailing rates for man labor were from 25 to 35 cents an hour for seed-bed preparation and seeding and 60 to 80 cents for harvesting and marketing. Horse labor cost from 18 cents an hour in Missouri to 25 cents in Ford County, Kans. Together man and horse labor made up nearly 35 per cent of the total cost per acre.

Under the general head "materials" are included seed, twine, manure and straw, green manure, commercial fertilizer, and poison for grasshopper control. Of these, seed cost was most important, at \$3.21 for spring wheat and \$2.18 for winter wheat. The use of the other items was not general, except binder twine in three spring-wheat and four winter-wheat areas, where all wheat was cut with a binder at an average cost of 51 and 68 cents, respectively. The use of commercial fertilizer was confined almost exclusively to Jasper County, Mo., where it averaged about \$2 per acre.

The thrashing cost was variable, depending on the proportion in which the thrashing crew was furnished by the farmer or the thrasher, and somewhat, of course, on the yield. The cost per acre for thrashing spring wheat was 52 cents less, but 4 cents a bushel more, than for thrashing winter wheat.

The "other costs" include taxes and insurance, use-cost of tractor, use-cost of other farm machinery, loss on abandoned wheat acreage, sack rent, and general expense. The last mentioned was found to be about 12 per cent of the combined cost for labor materials and thrashing. Tractor and machinery use-cost varied, but averaged \$1.77 for spring

wheat and \$1.86 for winter wheat acreage. Taxes varied from 25 to 95 cents an acre. Small credits for pasture were found in the winter wheat areas and deducted from the total of "other costs."

Use of land was the largest single item of cost in all areas except Morton County, N. Dak. It is determined for cash-rented farms by the rent per acre, for share-rented farms by the quantity of wheat given as rent times the selling price per bushel, and for owned farms by the valuation of the land times the interest rate on first mortgages. The lowest use-cost of land observed was \$1.25 an acre cash rent in Morton County, N. Dak. The value of owned wheat land in that county averaged \$36. The highest use-of-land cost noted was \$20.26 on a farm in St. Charles County, Mo., rented for a 2/5 share. The highest average value of owned wheat land was \$241 in Saline County, Mo.

The Trend of Costs and Wheat Prices.

The 1919 crop was produced at a high level of cost. All the items of cost had been increasing for several years (Fig. 40). The price of wheat also had risen at the same time and in somewhat greater proportion. The 1920 crop was grown at costs even higher than for the 1919 crop, but, before the 1920 crop could be disposed of, the price of wheat fell sharply, greatly reducing the returns.

For the 1921 crop, wages were somewhat lower, because, with the falling price of farm products, farmers were unwilling to pay the wages of the preceding five years. The prices of things farmers buy slacked off a little, but much less than the price of wheat. Land values, which had increased constantly, did not fall off much, and freight rates remained very high. The prospect for the 1922 crop is not particularly promising with respect to price. It is particularly necessary at this time for wheat farmers to grow the crop with small cash outlay, so that they may get for their own work all there is in the crop.

Method of Estimating Cost of Production Illustrated.

Each farmer, in his own interest, should forecast his costs and returns, and plan accordingly. Then he should observe as he works how closely he can come to his plan; or

finding changes of operation advisable or forced on him, he will know at once how and how much the final results will be affected. At the end of the season he has a record of fact to compare with his forecast. Nobody can tell him more about the facts for his farm than he can have immediately available at any time with the very small amount of additional effort required to make definite observations, and preserve them in writing for reference and for use in making estimates and checking results. Farmers will find that careful estimating from *definite facts of their own*, in addition to whatever help they may get from statistics generally available, is of practical service in forming decisions leading to greater returns.

For convenience of those not in the habit of figuring costs, the following form is offered, using the figures for

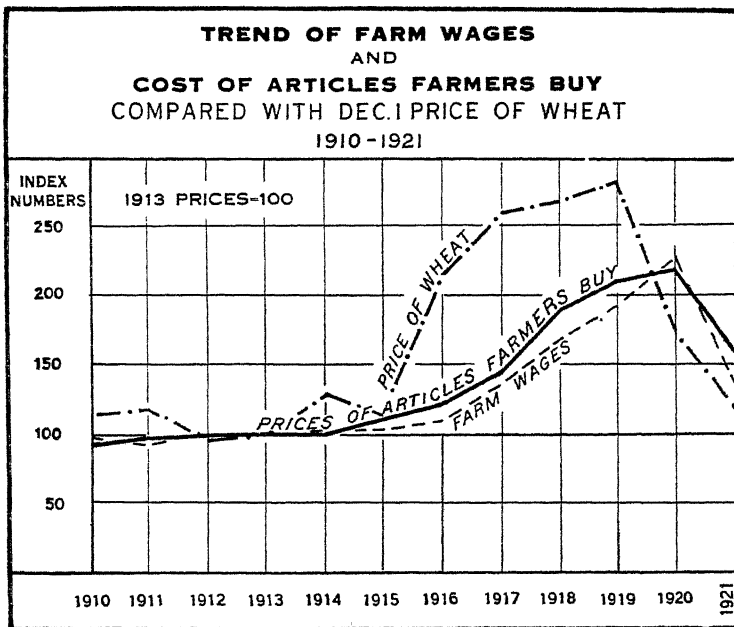


FIG. 40.—The course of prices and wages in the period 1910 to 1921 is shown in relative terms, using the prices and wages of 1913 as 100. Prices of articles farmers buy rose less rapidly than the price of wheat, but when the price of wheat fell sharply and greatly in 1920, farm wages and the prices of things farmers buy remained high, and have not yet fallen in line with the price of wheat.

120 *Yearbook of the Department of Agriculture, 1921.*

the average farm in McPherson County, Kans., in 1919. Each farmer, of course, must use the cost rates he has determined for his own farm.

Examples for figuring costs per acre and per bushel.

Item of cost.	Average crop of 1919, McPherson County, Kans.			Your farm, 1921.			Your farm, 1922.		
	Amount.	Price.	Cost.	Amount.	Price.	Cost.	Amount.	Price.	Cost.
Acres of wheat per farm.....	133 a....	.....	.....	.....	.....	.....	.....	.....	.....
Production per farm.....	1,687 bu.	.....	.....	.....	.....	.....	.....	.....	.....
Yield of wheat per acre.....	12.7 bu..	.....	.....	.....	.....	.....	.....	.....	.....
Operating costs per acre:									
Preparation and seeding—									
Man labor.....	4.5 hrs..	\$0.36	\$1.62	.....	.....	.....	.....	.....	.....
Horse labor.....	18 8 hrs..	.19	3.58	.....	.....	.....	.....	.....	.....
Harvesting and market- ing—									
Man labor.....	4 8 hrs..	.80	3.89	.....	.....	.....	.....	.....	.....
Horse labor.....	8 1 hrs..	.20	1.61	.....	.....	.....	.....	.....	.....
Seed.....	1.19 bu..	1.98	2 36	.....	.....	.....	.....	.....	.....
Binder twine.....	2.8 lbs..	.23	.63	.....	.....	.....	.....	.....	.....
Thrashing ($\frac{3}{4}$ shock thrashed).....	12.7 bu..	.23	2.83	.....	.....	.....	.....	.....	.....
Total of above cost items (76 per cent of total operating cost) ¹.....	.....	.....	16.52	.....	.....	.....	.....	.....	.....
Other operating costs (24 per cent).....	.....	.....	5.24	.....	.....	.....	.....	.....	.....
Total operating cost per acre.....	.....	.....	21 76	.....	.....	.....	.....	.....	.....
Operating cost per bushel (\$21.76 ÷ yield 12.7 bushels).....	.....	.....	1 71	.....	.....	.....	.....	.....	.....
Rent, or current interest on fair valuation of land.....	.....	.....	8.44	.....	.....	.....	.....	.....	.....
Cost per acre, including land.....	.....	.....	30.20	.....	.....	.....	.....	.....	.....
Cost per bushel, including land (\$30.20 ÷ 12.7).....	.....	.....	2 38	.....	.....	.....	.....	.....	.....

¹ These costs may not hold exactly at 76 per cent for individual farms showing wide variations in the size of the sum of items listed nor for those with unusually high or low other miscellaneous costs.

Financing Wheat Production.

To a very considerable extent, indeed to a far greater degree than in most other industries, the financing of the wheat crop is done with the farmers' own capital. The credit

sought and obtained in most cases is only supplementary to the capital invested by the farmer himself. The wheat grower may need production credit, which will enable him to prepare his soil, procure suitable seed, maintain his family and live stock during the crop-growing season, and to employ help in reaping and thrashing his grain. All of this credit will not be needed, of course, for the entire production period, but must be available for use when needed in carrying out the farm program. Its term, therefore, may vary from a few days to six months, and it is needed longer in case prices at thrashing time are so low that holding the wheat seems desirable.

An inquiry from banks, conducted by the department some months ago, indicated that in Kansas, a typical winter-wheat State, 45 per cent of the loans to farmers were made on their personal notes, without indorsement; 13 per cent on notes with one or more indorsements; 29 per cent on live-stock mortgages; 10 per cent on crop liens; and the remaining 3 per cent on warehouse receipts, stocks and bonds, and miscellaneous security. In North Dakota, a typical spring-wheat State, the same inquiry indicated that 27 per cent of the farmers' loans were obtained on notes without indorsement, 9 per cent on notes with indorsement, 43 per cent on live-stock mortgages, 12 per cent on crop liens, and the remaining 9 per cent on warehouse receipts, stocks and bonds, and other forms of security.

Doubtless the crop to be produced should constitute the leading security for a loan obtained to assist in its production, as in effect the money is invested in the crop. Owing to the hazards to which growing crops are exposed, however, crop liens are not looked upon as a desirable form of security. The thing needed to bring crops into use as security for loans is a suitable form of crop insurance. Hitherto, hail insurance has been the only form of such insurance generally available. This by no means fully meets the requirements. Crop insurance, like life insurance, should cover all hazards beyond the control of the insured. Several attempts already have been made to give such coverage, and it is to be hoped that general crop insurance will in some way be made available on reasonable terms.

Marketing Wheat.

When a farmer hauls a load of wheat to a flour mill and exchanges it for flour and feed the problem of marketing is a very simple one. Usually, however, the processes of marketing are much more complex than this. The wheat is hauled to a country elevator and sold. The price paid for it, and, to some extent, the marketing processes which follow, are determined by many factors, some of them far beyond the control of the farmer. Among these factors are (1) the class of wheat grown, (2) the quality of the grain sold, (3) the direction, distance, time, and rate of movement of wheat, (4) the farmer's financial situation, (5) the freight rate charged, and (6) the total production at home and abroad and the quantity carried over from previous crops. Discussion of these factors follows.

Classes of Wheat.

Under the Official Wheat Standards of the United States, wheat is separated into six commercial classes as follows: (1) Hard Red Spring, (2) Durum, (3) Hard Red Winter, (4) Soft Red Winter, (5) Common White, and (6) White Club.¹ If wheat of one class has more than 10 per cent of another mixed with it, the mixture is classed "Mixed Wheat." Four classes, Hard Red Spring, Durum, Hard Red Winter, and Common White, are divided into subclasses on the basis of color and texture of kernels. Each of the first three classes named has three subclasses, while Common White has two subclasses. Subclasses are recognized because, so far as these classes are concerned, the best outward index of quality, from the standpoint of utilization of flour made therefrom, is the color and texture of the kernels, that is, whether dark, hard and vitreous, or yellow, mottled, and starchy.

Hard Red Spring wheat is grown principally in the north-central part of the United States (Fig. 41), where the winters are too severe for the production of winter wheat. Nearly 14 million acres of this class of wheat are grown annually in the United States, comprising nearly one-fourth of the

¹ Classes 5 and 6 have been combined by recent order of the Secretary of Agriculture, effective July 17, 1922.

total wheat acreage. Although there are 24 varieties of Hard Red Spring wheat, about two-thirds of the acreage of this class is sown to one variety, Marquis. The strongest flours for bread making are produced from Hard Red Spring wheat.

Durum wheat is grown in almost the same area (Fig. 42) as Hard Red Spring wheat. The district of heaviest production of durum wheat is just west of the Red River Valley in North Dakota. About 4 million acres of durum wheat have been grown annually in the United States for several years. It comprises about one-sixteenth of the total wheat acreage. Arnautka and Kubanka are the leading varieties among the 11 commercial durum wheats grown.

Durum wheat usually yields more than Hard Red Spring wheat in this northern spring-wheat belt, because of its greater resistance to drought and to black stem rust.

Hard Red Winter wheat is grown principally in the central Great Plains area (Fig. 43), where dry summers and rather dry winters prevail. Hard Red Winter wheat is not well adapted to humid sections. More than 17 million acres are grown annually in the United States, comprising nearly one-third of the total wheat acreage. The leading varieties are Turkey, Kharkof, and Kanred. Hard Red Winter wheat is used in the manufacture of bread-making flour.

Soft Red Winter wheat is grown largely in the humid sections in the eastern half of the United States (Fig. 44). About 16 million acres are grown annually, comprising over 30 per cent of the total wheat acreage. About 65 varieties are grown, the principal ones being Fultz, Fulcaster, Mediterranean, Poole, Red May, and Red Wave.

Soft Red Winter wheat is used in the manufacture of both bread-making and pastry flours. The flour from Hard Red Spring and Hard Red Winter wheats often is blended with that of this class to make it a stronger bread flour.

Common White wheat is grown in both the eastern and western parts of the United States (Fig. 45). Where now grown it usually outyields the other classes of wheat. Over 3 million acres, or somewhat more than 5 per cent of the total wheat acreage, is sown to Common White wheat annually in the United States. More than 50 varieties are grown, the leading ones being Pacific Bluestem, Goldcoin, Baart, Defi-

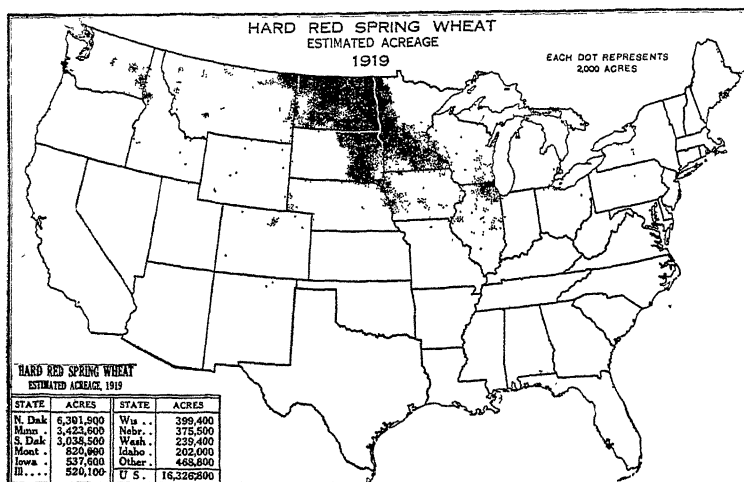


FIG. 41.—More than two-thirds of the spring wheat of the United States belongs to this class, which is grown under subhumid to semiarid conditions favorable to high quality. North Dakota, Minnesota, and South Dakota lead in its production. It sets the standard for bread-making flour.

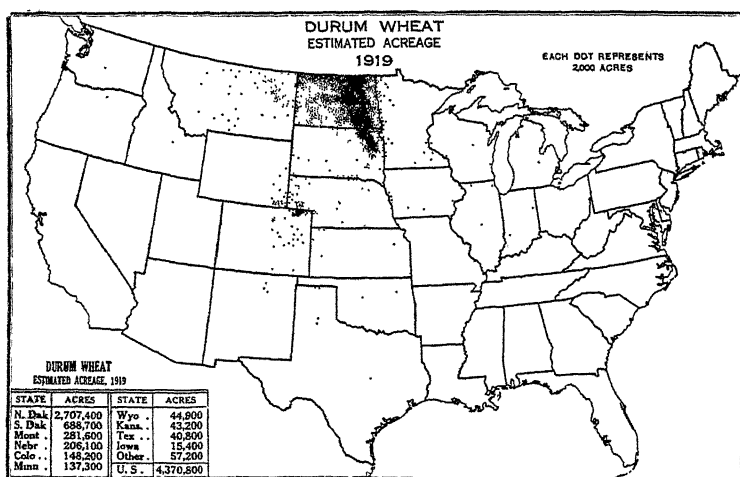


FIG. 42.—Durum wheat is grown in the midst of the hard red spring wheat area. The center of the area of production gradually is moving westward to drier districts. From durum wheat is made a granular flour called semolina from which macaroni, spaghetti, vermicelli, and other edible pastes are manufactured.

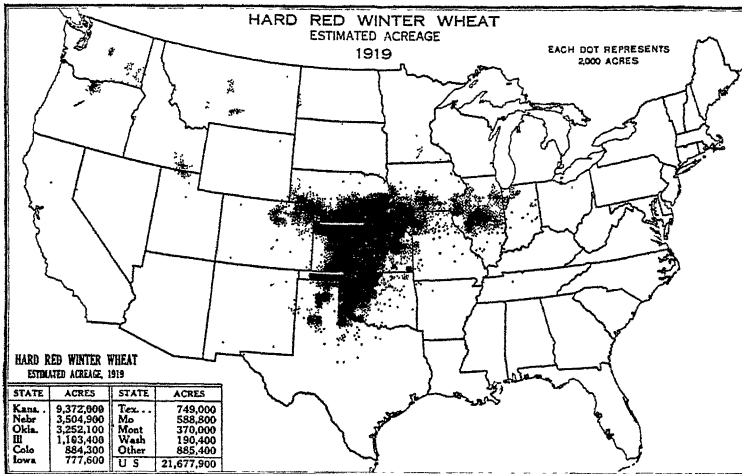


FIG. 43.—Hard red winter wheat is produced in enormous quantities in the central section of the Great Plains area. It occupies nearly one-third of the total acreage of all wheat and about half of the total winter-wheat acreage in the United States. Wheat of this class ranks next to hard red spring in quality for flour manufacture.

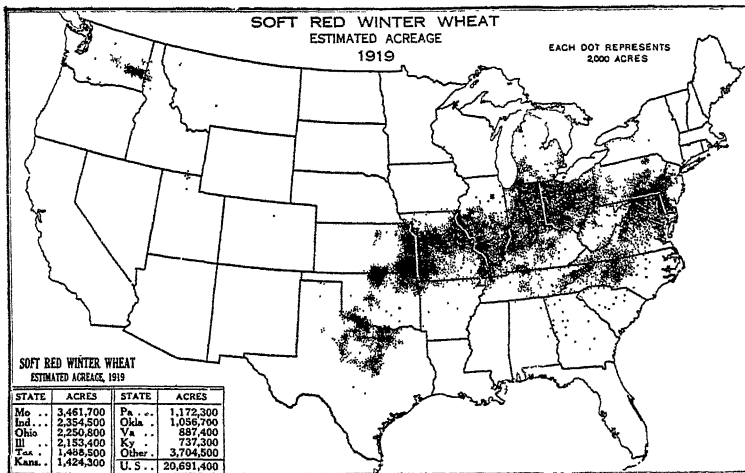


FIG. 44.—Soft red winter wheat is grown over a wide area, mostly under humid conditions. It also occupies nearly one-third of the total acreage of all wheat and nearly one-half of the total acreage of winter wheat. The States leading in its production are Missouri, Indiana, Ohio, and Illinois.

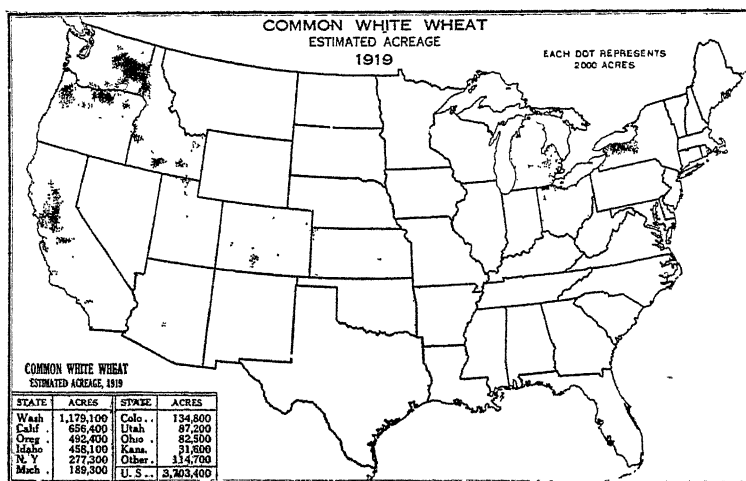


FIG. 45.—Common white wheat is grown chiefly in the Far West but also in the Great Lakes section. Washington, California, Oregon, and Idaho lead in its production in the West; New York and Michigan in the East.

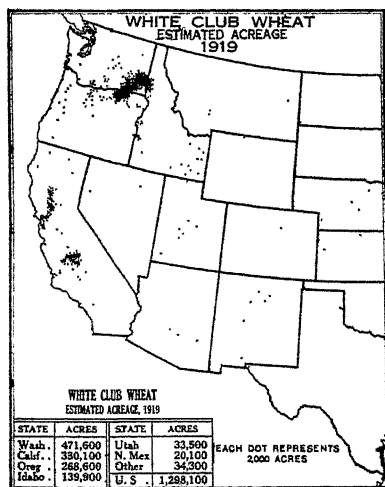


FIG. 46.—White Club wheat is grown only in the West, chiefly in Washington, Oregon, California, and Idaho.

ance, Dicklow, and Dawson (Golden Chaff). Common White wheat is used in making pastry flours and breakfast foods and to some extent in bread-making flours.

White Club wheat is grown only in the western part of this country (Fig. 46). In some sections in this region it out-yields all other classes. Although more than 1 million acres of White Club wheat are grown annually, it comprises less than 2 per cent of the total wheat acreage.

White Club wheat is used in making starchy flours for pastry or is exported to South America and the Orient.

Quality of the Wheat Crops.

The wheat crop varies in quality from year to year, as a result of climatic and other conditions during the growing season, and especially in the harvest period. Each year the Department of Agriculture estimates the average quality of the crop from reports received from many farmers, millers, and elevator operators. These estimates for the 22 years, 1900 to 1921, are given in Figure 47. They may be considered as a general index for each year of all the conditions that have affected the crop while it was on the farm

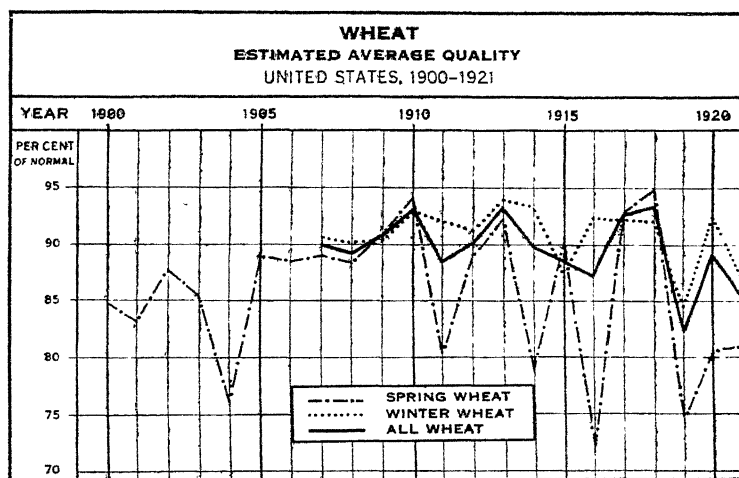


FIG. 47.—The quality of the wheat crop varies with the conditions under which it was grown. Unfavorable weather during growth, harvest, or thrashing is reflected in the quality of the grain. Drought, rain, and rust are the chief factors.

and, as such, they enable a comparison to be made of the general seasonal conditions as well as the crops of different years.

The very low quality of spring wheat in 1904 and 1916 was due chiefly to epidemics of stem rust. The low quality of spring wheat in 1911 and 1914 was due chiefly to severe drought. The low quality of all wheat in 1919 was due partly to drought, partly to rust, and partly to excessive summer rains. The crop of 1921 was of rather low quality, winter wheat being 87.1 per cent, spring wheat 82.2 per cent, and the average of all wheat 85.8 per cent, owing to summer heat and other causes.

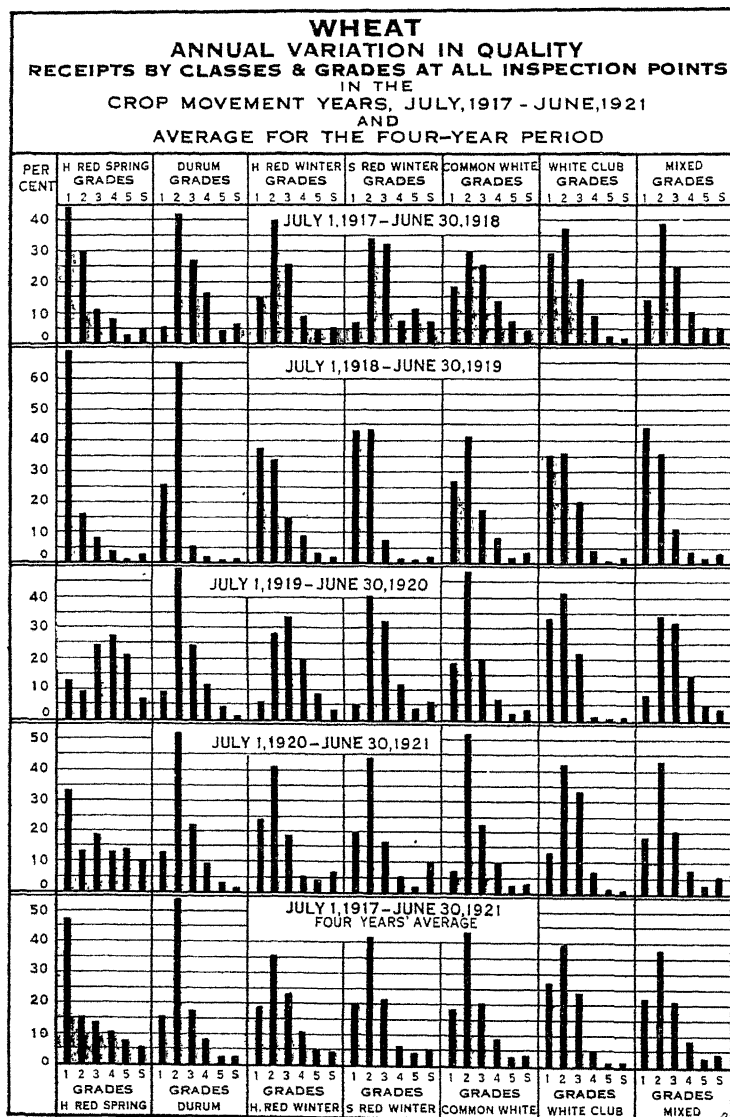


FIG. 48.—In these 4 years the great bulk of the wheat falls into the three upper grades, Nos. 1, 2, and 3. Nearly half of the hard red spring wheat, on the average, goes into No. 1. On the average of good and bad crop years together, more than 50 per cent of all wheat inspected is graded No. 1 and No. 2.

Quality as Shown by Grade.

The quality and consequent grade of wheat are dependent primarily upon the weather conditions which prevail during the growing season and harvest and the conditions under which wheat is stored from time of harvest until it is marketed.

Each subclass of wheat is divided into five numerical grades (1, 2, 3, 4, and 5), dependent upon the following factors: Test weight per bushel, moisture content, percentage of damaged kernels, purity, cleanliness, and condition. Wheat failing to meet the specifications for any one of the five numerical grades is graded "Sample Grade."

Wheat, after leaving the farm, in finding its way through channels of interstate commerce to distant mills and to seaboard cities for export, is inspected and graded at

terminal markets in accordance with the official wheat standards of the United States. There were 92 such inspection points in 1917, 118 in 1918, 143 in 1919, 158 in 1920, and 167 in 1921. The inspectors at terminal markets are not employees of the Government, but are employed by State grain-inspection departments, chambers of commerce, and boards of trade, or in some cases they operate independently on a fee basis. These inspectors, however, are licensed by the United States Department of Agriculture, and use the Federal standards.

In Figure 48 is shown the annual and average quality of the wheat produced in the United States in the four years, 1917 to 1920, inclusive, as indicated by the grades given to that portion of the crop which moved in interstate commerce from July, 1917, to June, 1921, inclusive. The graph is

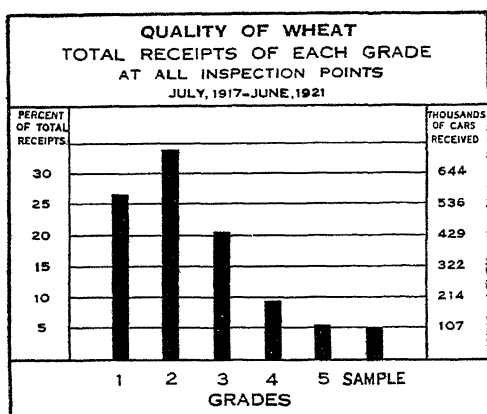


FIG. 49.—Bird's-eye view of wheat quality. Inspected receipts of all six classes, in all four years. About 60 per cent in grades 1 and 2, and about 80 per cent in grades 1, 2, and 3.

based upon the total carload receipts inspected at all inspection points in each year. Figure 49 shows in the same way the average quality of all classes in all four years. An indication of the effect of class and quality (grade) of wheat on price is given in Figure 59.

Surplus and Deficiency of Production in Relation to Movement of the Wheat Crop.

The marketing of wheat takes from the farm producer what he does not keep for food, feed, and seed, and places it in the hands of other consumers. It is estimated that

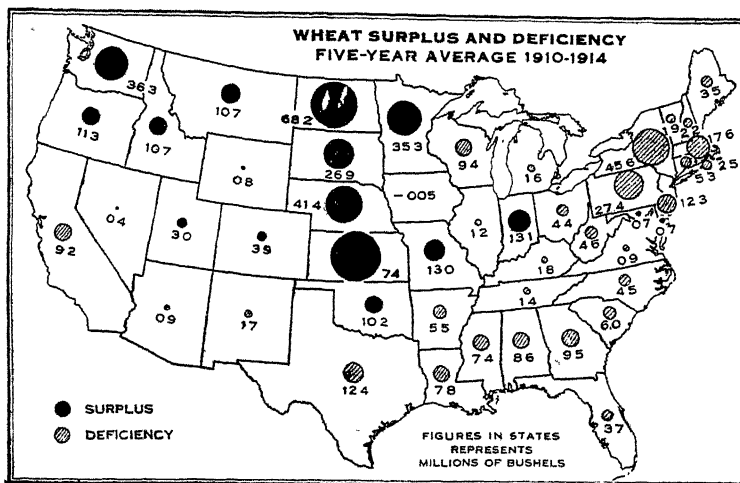


FIG. 50.—The States east of the Mississippi, except Indiana, Maryland, and Delaware, do not produce enough to supply their own needs, and the same is true of the Southwest from Texas to California. The great surplus-producing States are Kansas, North Dakota, Nebraska, Minnesota, and Washington.

about 60 per cent of the wheat crop ordinarily is shipped out of the county where grown. This may be considered the commercial crop, and it is this part with which we must deal in the discussion of wheat marketing.

A large part of the farm surplus is consumed in the United States by farmers who do not produce enough for their own needs and by people who are not engaged in agriculture.

Under the average conditions of the five years, 1910-1914, inclusive, 19 States (Fig. 50) each had a surplus of wheat above its own requirements for food, feed, and seed. This surplus supplied the other 30 States whose wheat production severally was below their consumption and provided the national surplus for export.

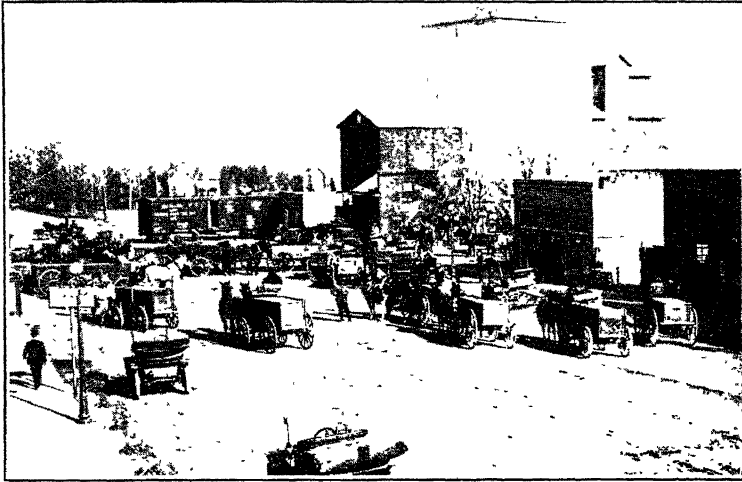


FIG. 51 —A busy day at a country elevator.

Movement from the Farm.

The first movement of wheat from the farmer to the ultimate consumer usually is to the local or country elevator (Fig. 51) and thence to great terminal elevators (Fig. 52) for further distribution to mills at home and abroad.

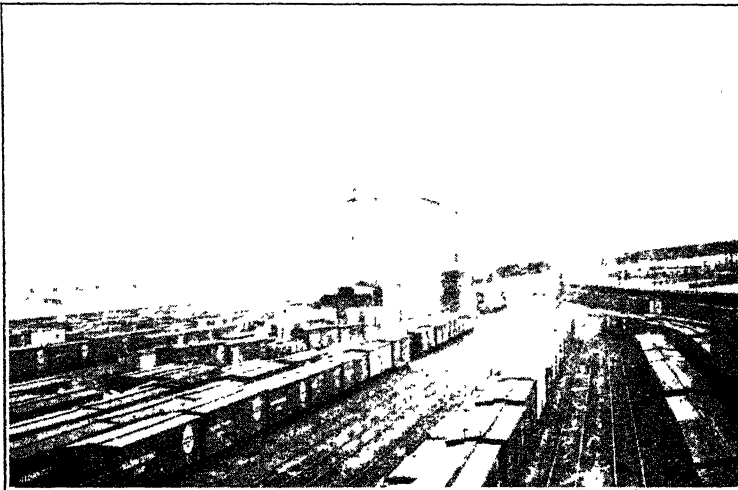


FIG. 52.—Terminal elevator surrounded by cars loaded with grain.

The wheat may be hauled directly from the separator as it is thrashed, or it may be binned on the farm first, or part may be handled in each way. In general, however, a rapid movement begins soon after harvest (Fig. 53), due to the necessity for money, the lack of storage space, and the cost of storing. In the Far West sack handling still is the rule, and, though much grain moves direct from separator or "combine" to the warehouse, the dry summer climate allows cheap storage on the farm, where the bags may lie for weeks in a great rick in the field without cover.

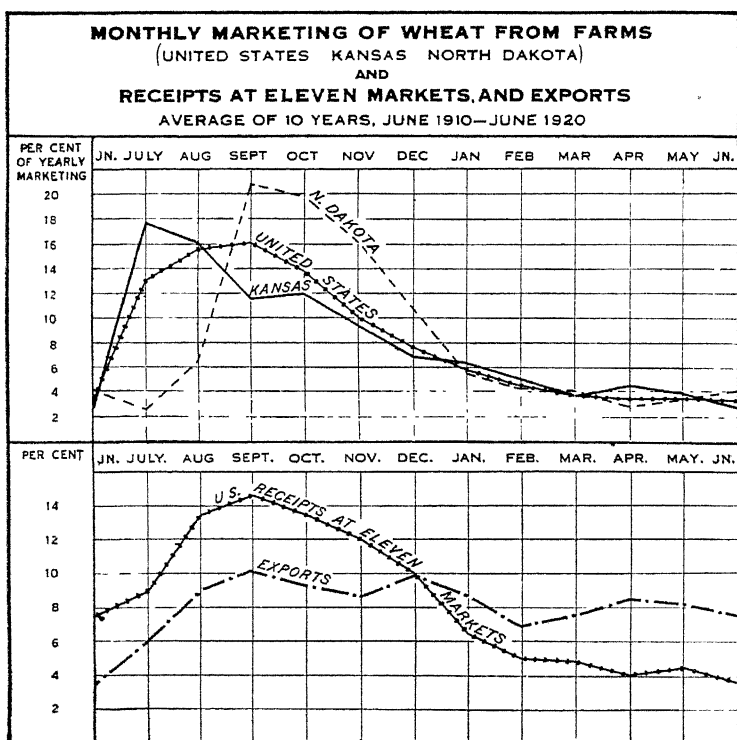


FIG. 53.—Movement of wheat from the farms is very rapid after harvest, which is progressively later from south to north. Nearly three-fourths of the crop leaves the farms in the first six months of the crop-movement year. Receipts at central markets naturally correspond very closely; exports, on the other hand, are much more evenly distributed throughout the year. (See Fig. 59 also.)

The average time and the rate of movement from the farm in Kansas and North Dakota and in the whole United States are shown in Figure 53. From Kansas the movement begins in the latter part of June or in early July. The heaviest movement from the farms in Kansas ordinarily is in July. As one goes farther north the harvest and the beginning of movement occur successively later. In North Dakota the new crop does not begin to move until in August and the peak of the flow occurs in September.

For the whole country, the peak of flow from farms is in August and September, with gradual decrease to January. More than one-third of the crop was marketed in July and August in the 10-year period (1911-1920) and nearly three-fourths of the entire crop in the first six months of the crop-movement year, namely, from July to December, inclusive.

The lower part of Figure 53 shows the progressive monthly receipts at 11 principal markets in the North Central States, and the exports from the country. Market receipts are seen to agree well with the movement from farms, but exports are much more evenly distributed throughout the year.

Financing Wheat Storage and Movement.

Since the fall in prices of farm products in 1920, marketing credit has called for increased attention. By marketing credit, in so far as the farmer is concerned, is meant chiefly the credit which is needed after the grain has been harvested and which will enable him to market his grain in an orderly manner. The amount and duration of this credit depends largely, as already intimated, upon the condition of the market. If the price of wheat is high, the farmer is inclined to sell quickly, in which case credit obligations at the banks will be rapidly reduced. Rapid release of a large volume of the crop, however, may have the effect of congesting transportation and storage facilities and depressing the price (Fig. 59). When market prices are exceptionally low, there is a natural tendency to postpone selling, and this causes a special demand for credit. In the absence of a suitable warehouse system, the security for such loans frequently is the same as for production credit. In many cases existing obligations are renewed for increased amounts.

The development of a well-organized warehouse system would be highly advantageous to wheat growers, as well as to producers of other nonperishable agricultural products, in obtaining credit during the marketing season. By utilizing a licensed and properly supervised warehouse, the farmer should find little difficulty in obtaining advances on his note secured by a warehouse receipt, or on drafts accepted by a warehouse association, when he desires to defer the selling of his crop. Such notes would be eligible for rediscount for six months at the various Federal reserve banks, when the proceeds are used for agricultural purposes.

Only meager information is available on the financing involved in the orderly movement of the wheat crop from the farmer to the mill or the exporter. Some interesting data on the sources of borrowings by different types of country elevators and warehouses, however, have been compiled by the Federal Trade Commission. The study covered a total of 4,925 establishments, including 2,353 line houses and 2,572 individual houses. The so-called line houses were subdivided as commercial, cooperative, mill, and malster, while the individual establishments were classified as cooperative, independent, mill, and malster.

All line houses, it was found, were financed largely by the head offices, this source of funds representing over 80 per cent of the total borrowings. Local banks furnished about 11 per cent of the loans, and the balance came from commission houses, mills, city banks, and other sources.

The individual houses were financed more largely by local banks, which furnished, in their case, 65 per cent of the total borrowings. Commission houses furnished 17 per cent and mills 3 per cent, while farmers and other local residents furnished about 2½ per cent. The balance, as in the case of line elevators, came from scattered sources.

There is little doubt, of course, that the commission houses, as well as the head offices of line elevators, in turn rely upon the larger city banks for considerable amounts of credit.

Freight Rates.

The expense or cost of taking wheat from the farm to the market is an important factor in determining the price the farmer obtains for it. Freight rates make up an important part of the costs of marketing. Before the war it cost from 8 to 10 cents per bushel to ship wheat from Chicago to New York (Fig. 54) and about 12 cents from Kansas City to New Orleans. Beginning with 1917 the rates rose, and by 1920 they had doubled. The history of freight rates from Chi-

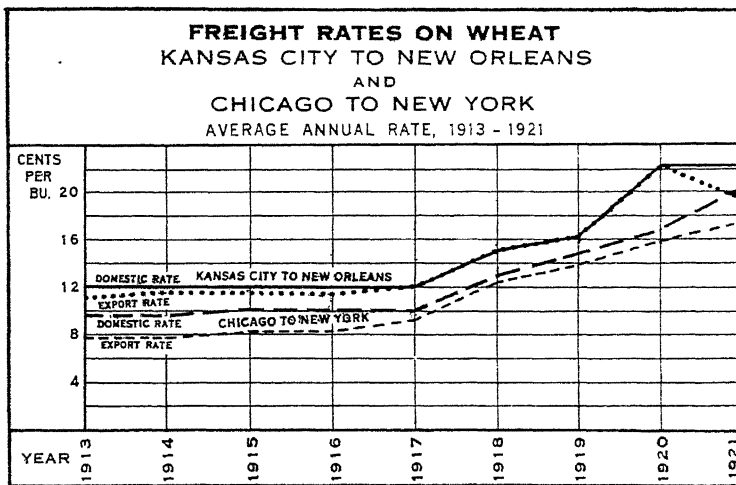


FIG. 54.—Freight rates on wheat from Chicago to New York and Kansas City to New Orleans rose rapidly with our entry into the World War and were higher in 1920 and 1921 than at any time since 1886. The average ocean rate for 1921 was higher than that of any prewar year for which records are available.

cago to New York is interesting. Following the Civil War rates were very high. Later they declined from about 32 cents per bushel in 1870-1873 to 8 cents per bushel in 1905.

The rate for 1920 was the highest since 1886. The high rates scarcely were felt until the price of wheat started downward. To pay 16 cents out of \$2.70 did not seem as burdensome as paying 8 cents out of \$1, but when the price of wheat fell to \$1.60 in New York, as it did in 1921, the 16-cent rate became a real burden, as most of the surplus wheat is produced west of Chicago.

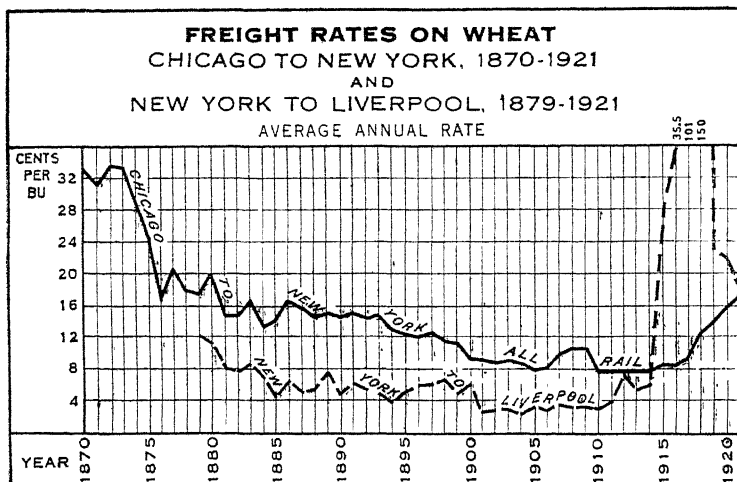


FIG. 55.—The freight rate from Chicago to New York is the export rate. The domestic rate is higher than the export rate, if there is any difference between the two. The New York to Liverpool rate rose above \$1.50 in 1918. (See Fig. 56.)

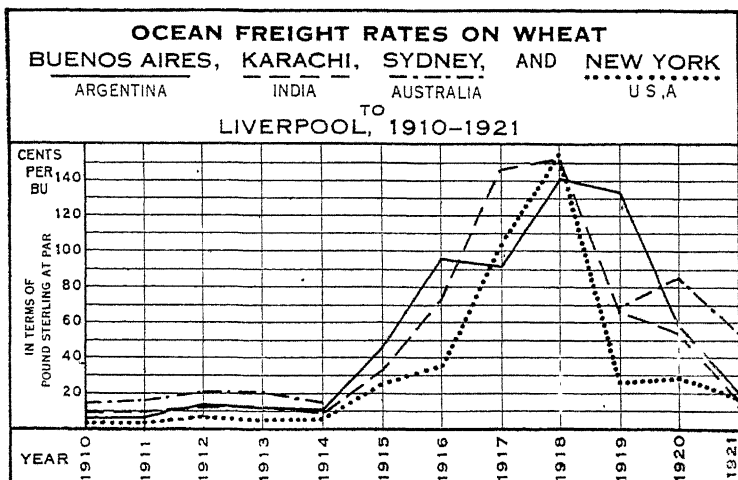


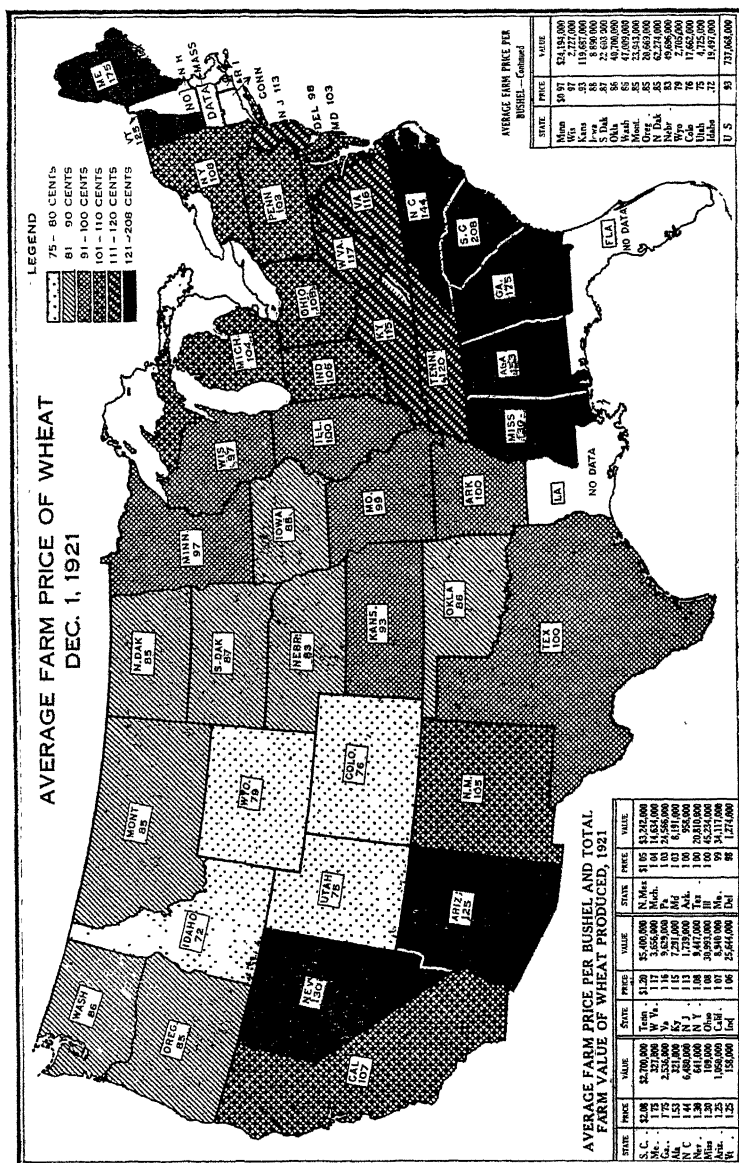
FIG. 56.—Ocean freight rates rose rapidly after the outbreak of the World War in 1914 and fell rapidly after the signing of the armistice on November 11, 1918, while rail freight rates (see Fig. 54) rose with our entry into the war and have not fallen. The New York to Liverpool rate usually is lower than from points in other producing countries because of the shorter distance.

The ocean rates on wheat from New York to Liverpool (Fig. 55) had declined to a very low point before the World War. In the 10-year period, 1901-1910, it cost less than 4 cents a bushel to ship wheat from New York to Liverpool. The submarine warfare made shipping very scarce and ocean freighting a very hazardous enterprise. Rates became very high; in fact, the allied Governments practically fixed rates through the most critical period of the war. Soon after peace was declared, rates began to fall, but they have not yet returned to the prewar level. The quotation for January 27, 1922, was $9\frac{1}{4}$ cents per bushel, or more than double the quotation for January 30, 1914, which was $4\frac{1}{2}$ cents.

The rates from New York to Liverpool, England, a great import market for Europe, generally are less than the rates from other wheat-exporting countries (Fig. 56). The longest haul is from Sydney to Liverpool, and from this point naturally the rates are highest. The rates from all countries were very high during the World War, but declined immediately after the Armistice. Rates from New York have fallen more rapidly than the rates from any other point, presumably because there is more competition for shipping from New York to Liverpool than from other points. It may be noted also that during the first part of the war period rates from New York to Liverpool were much cheaper than rates from other countries, which explains in part the very great increase in our exports.

Prices of Wheat.

Many factors enter into the determination of the price paid for wheat to producers in any locality at a given time. Among the important factors to be considered are (1) character of the local market, whether it is in an area of surplus or deficiency production (Fig. 50); (2) the distance to markets and cost of transportation (Fig. 57); (3) the time in relation to the season (Fig. 59); (4) the total available supply for the markets of the world in relation to the consumers' demands; and (5) financial conditions and prices of other commodities. Prices paid at the principal central and export markets are determined by similar conditions. The several factors to be considered can be discussed only briefly here.



Farm Prices.

Local variations in farm prices.—The wide variation in the prices paid wheat producers in the United States upon any given date is illustrated on the map in Figure 57, which shows the geographic distribution of wheat prices received by producers on December 1, 1921. Prices are lowest in those surplus-producing States which are most disadvantageously located with respect to the large world markets, and highest in those States of deficiency production which are most disadvantageously located with respect to supplies. Farmers in surplus-producing areas receive approximately the price paid at the nearest large central or terminal market, less the cost of placing their wheat upon that market. Farmers in deficiency areas receive approximately the price paid to producers in the most distant surplus-producing area from which the deficiency is made up, plus the cost of shipping that wheat into their locality.

Annual variations in farm prices.—Variations in the world's production and demand and changes in price levels cause nation-wide variations in the farm prices of wheat (Fig. 58). Examples of the effects of large and small crops, wars, Government price fixing, and inflation and deflation all are shown in the movements of prices through the last 10 years.

In the first two years, 1912-1913, crops were good, and there were only the normal seasonal price movements, mostly between 75 cents and \$1 per bushel. In 1914 the World War broke out, and the price rose rapidly through the remainder of the season until on May 1, 1915, it reached approximately \$1.40. The high prices in the autumn and spring encouraged a greatly enlarged acreage, and an unusually good season caused high yields and the greatest production ever had in this country. Consequently by the 1st of June, when a large crop seemed certain, prices had begun to fall. All of the important surplus-producing countries except Australia produced large crops, and consequently prices remained low through the crop year 1915-16. In 1916 the Russian surplus was shut out of the world's markets, the crop of

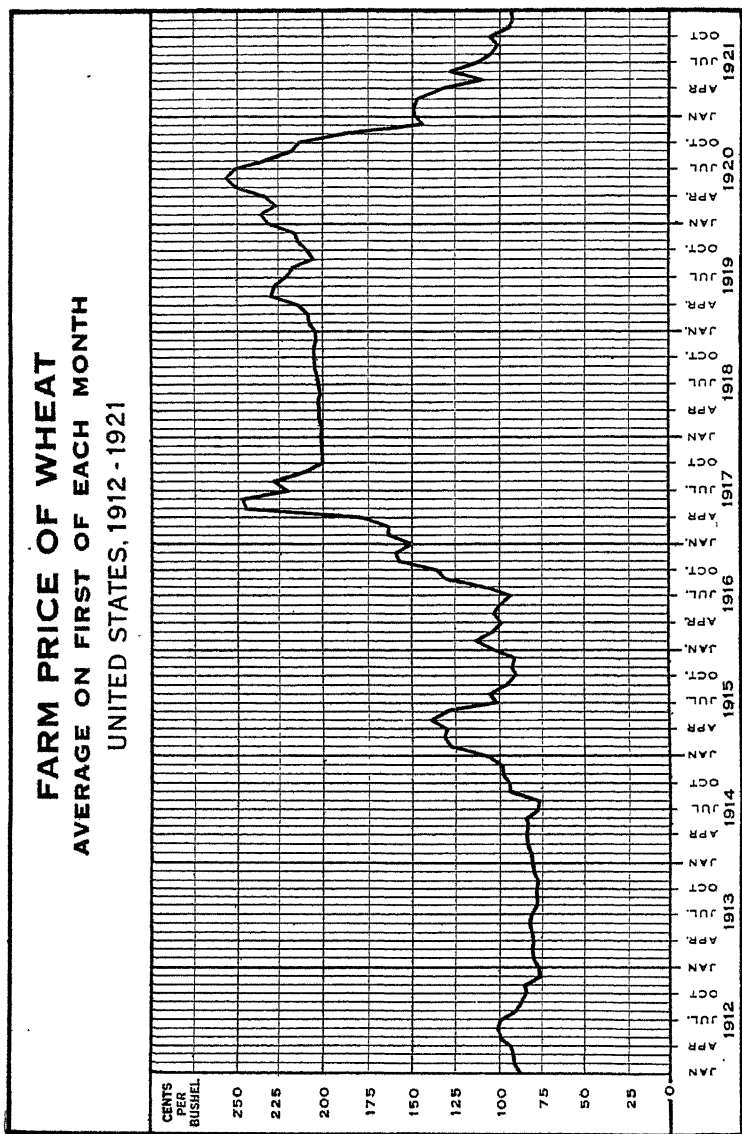


FIG. 58.—Note low farm price levels before the war, rise at the beginning of the war, fall with enormous production in 1915, rise with low production caused by rust injury in 1916, high levels after the United States entered the war, and rapid deflation after June 1, 1920.

the United States was short because of reduced acreage and severe injury by black stem rust, and prices rose rapidly after July.

After the United States entered the war in April, 1917, steps were taken to regulate the distribution and the price of wheat. The Food and Fuel Control Act of August 10, 1917, guaranteed a minimum price of \$2 per bushel for the crop of 1918. On August 30, 1917, the President fixed a minimum price for the 1917 crop at \$2.20 per bushel for No. 1 northern spring and its equivalents at Chicago, with differentials for grades and markets. Through the operations of the United States Grain Corporation this became the basic price for wheat. The average farm price of the whole country remained at a level of about \$2 per bushel throughout 1918. By an Executive order on June 21, 1918, the price of wheat was raised to \$2.26 a bushel for No. 1 northern spring and its equivalents at Chicago. In the spring of 1919 wheat prices rose sharply, reaching \$2.31 on May 1, but declined, under pressure of large acreage and large production, to about \$2.10 by October 1. With decreases in acreage and estimated production, prices rose rapidly thereafter, reaching \$2.58 on June 1, 1920, a month before the Government guaranty of a minimum price was terminated. General deflation began soon after and continued to the end of 1921, when the price stood near 90 cents.

Although the prices of all commodities did not rise as rapidly through 1916-17 as did the prices of wheat, after the price of wheat was fixed the average prices of all commodities continued to rise until May, 1920. Thus the prices through the war were not really as high as they seemed. Excepting the period from August, 1914, to October, 1915, and the period from August, 1916, to August, 1917, the price of wheat was relatively not far above the average prices of other commodities, and with the sharp break in the prices of other commodities wheat also fell. The precipitous fall and the low prices of 1921 have not been due to overproduction so much as to the general deflation of all prices. Compared with the general price level in 1921, the farm price of wheat fell to the lowest point it has ever reached in the United States.

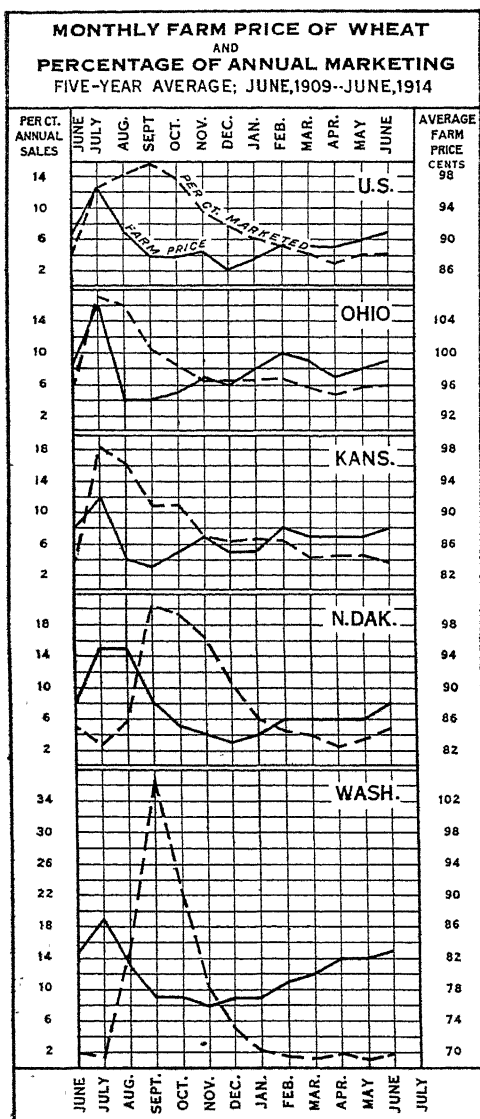


FIG. 59.—The farm price of wheat usually is relatively high on July 1, when the old crop is nearly gone and the new crop just beginning to move. Farm prices tend to fall rapidly during the next two months, when the great movement of wheat from the farms is taking place as harvest and thrashing progress.

Seasonal marketing in relation to farm prices.—A large part of the wheat crop is marketed in a few months after harvest (Fig. 59, see also Fig. 53), which causes a rapid decline in prices during the first few months of the new crop year (Figs. 58 and 59). This is one of the principal causes for the need of credit for storing grain. Taking the averages of farm prices of wheat by months from 1909 to 1913 as representing normal seasonal variations, it will be noted (Fig. 59) that the highest farm prices are paid about July 1, just as wheat of the new crop begins to arrive on the market. Prices decline rapidly from this high point until in September or October or occasionally later, after which they rise slowly and irregularly through winter, spring, and early summer to the highest point again about July 1.

Market Prices.

Market prices for wheat, like farm prices, vary with the class, subclass, and grade of wheat, as well as with the location and nature of the market.

Market prices of different grades of wheat.—In Figure 60 are shown the prices, by months, of No. 1 grade of the leading subclass of four classes of wheat, and the discounts in price for grades 2, 3, 4, and 5 below the price of No. 1. These figures cover the crop-movement year from July, 1920, to June, 1921, and cover subclasses at St. Louis, Kansas City, and Minneapolis. The prices are averages of the reported cash sales of each grade on those days in each month on which all five grades were represented. The prices of No. 1 are given in dollars and cents. The prices of the other grades are discounts in cents per bushel below the price of No. 1; for example, at St. Louis in July, 1920, No. 1 sold at \$2.75; No. 2 at \$2.73, a discount of 2 cents; and Nos. 4 and 5 at \$2.70, a discount of 5 cents below No. 1.

An outstanding feature of the graph is the wide spread between the prices of the different grades of Dark Northern at Minneapolis, compared with the narrow spread between the prices of the different grades of Hard Winter at Kansas City. While the figures given cover only one year, a study of similar data for other years shows a fairly similar condition.

Probably several reasons must be sought for the difference in price spreads between the different grades in the different cases. Hard Red Spring wheat is used almost exclusively for domestic milling. Minneapolis is the largest milling center in the United States. Most of the wheat arriving there is bought by sample by mill buyers to whom low-grade wheat is not attractive. The best grade makes a flour of extra strength and quality and is in great demand for milling by itself and for blending with other wheats. For this reason premium prices are paid for grade No. 1. There is markedly less demand for the successively lower grades because they are of less value for blending with wheat of other classes. This will account, in considerable measure, for the very heavy discounts for the lower grades. Hard spring wheat

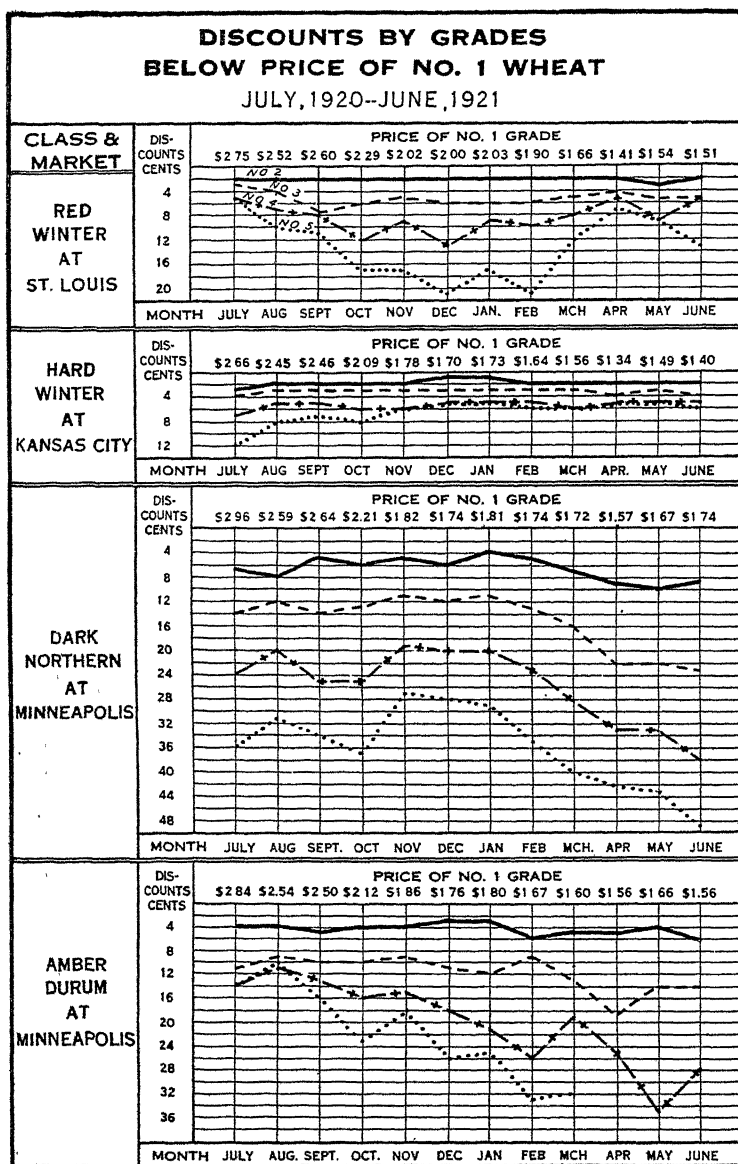


FIG. 60.—Market prices of No. 1 grade in the 1920 crop of the highest subclass in each of the four major classes of wheat, at one important market, by months, in the crop-movement year from July, 1920, to June 1921, with price discounts for grades 2, 3, 4, and 5 below the price of No. 1.

also usually is subject to more unfavorable climatic conditions than the winter wheats, and, therefore, more of it would fall into the lower grades, except that the requirements for admission to grade 1 are lower in the case of Hard Red Spring wheat. In spite of that fact about 35 per cent of the crop of 1920 graded below No. 3.

On the Kansas City market a considerable portion of the wheat is sold to exporters and to dealers other than millers whose competitive buying tends to absorb the lower grades at relatively small discounts. Grades 1 and 2 at Kansas City are both deliverable on contracts in the option or future trading market. Grade No. 3 also is deliverable upon future contracts at a discount of only 5 cents per bushel. These conditions serve to narrow the spread in price between grades, as compared with the spread in the milling market at Minneapolis.

Prices in world markets.—The prices of wheat in all the great markets of the world generally move together. The price in Liverpool generally is higher than the prices in New York and Chicago (Fig. 61), but it is very difficult to compare prices in these three markets. It is not proper to take the difference in prices as the cost of transporting and handling the wheat between the different markets. The cost of transportation and charges for handling are two different factors in causing the difference in prices. Market quotations in New York and Chicago generally follow very closely the market quotations in Liverpool, but certain conditions may so affect any one of the three markets as to throw it out of line with the others.

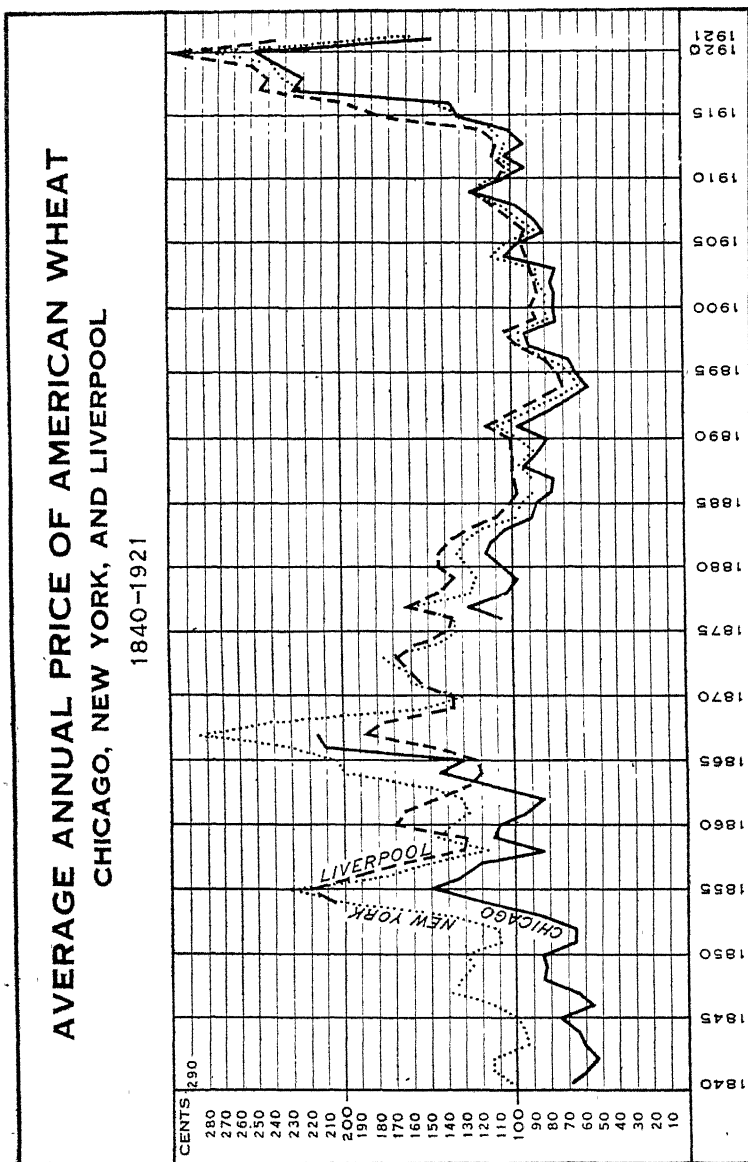


FIG. 61.—Trend of average annual price of American wheat in Chicago, New York, and Liverpool from 1840 to 1921. In general, the spread in price has decreased steadily throughout the years, but prices in the three markets are not readily comparable.

The Situation and Outlook.

What does the future hold for the American wheat grower? After the foregoing summary of the economic phases of the production and marketing of wheat, this is a natural and vitally important question. Any attempt to answer it requires consideration of the long-time trends (1) in the prices and purchasing power of wheat; (2) in acreage, acre yield, and production; (3) in consumption and export; and (4) in total population and the numbers living under rural and urban conditions in this country.

Farm Price and Purchasing Power of Wheat.

The quantity of goods that can be bought for a bushel of wheat is more significant than the number of dollars or cents for which it will sell. In Figure 62 is shown the trend of farm price and of purchasing power in terms of the 1913 dollar, from 1866 to 1921.

On December 1, 1866, the currency price of wheat was slightly higher than the peak price on December 1, 1919, but the purchasing power per bushel in 1866 was some 30 cents higher. The price fell after the Civil War just as it has fallen since the World War. In both cases the fall has been due largely to deflation, and in both cases the purchasing power also has fallen farther in proportion; that is, the price of wheat has fallen more rapidly and farther than the average prices of all commodities. In purchasing power the price of 94 cents on December 1, 1921, was lower than the low price of 49 cents per bushel on December 1, 1894.

As acre yields vary greatly from year to year, the farm value and purchasing power per acre (fig. 62) are a better index of the returns to farmers than are the price and purchasing power per bushel. A relatively high price per bushel was paid for the 1916 crop, but the farmer did not have as many bushels as usual. In fact, on the average, he received less in purchasing power for the 1916 crop than for the 1915 crop, which he sold at a lower price but of which he had many more bushels.

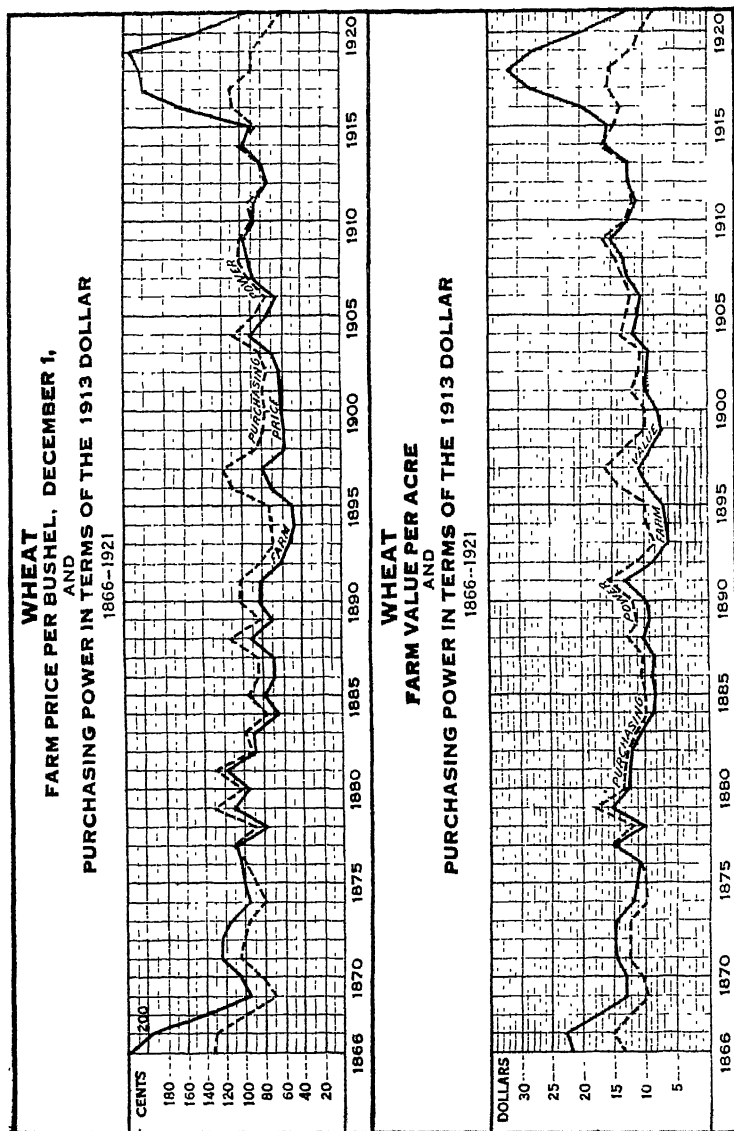


FIG. 62.—The purchasing power of wheat per bushel and per acre, in terms of the 1913 dollar, was low during and after the Civil War, fairly high from 1877 until 1909, and exceedingly low during the World War, in comparison with the farm price of wheat.

At the present time (May 1, 1922) the farm price of wheat is considerably higher than at the end of 1921, and, as the prices of other commodities farmers buy (Fig. 40) are decreasing slowly, the purchasing power of wheat is rising.

Trend of Acreage and Production.

The trends of acreage, acre yield, and production have been shown in Figure 7. Acreage has increased steadily as the country has developed. Average acre yields also increased about 25 per cent, or from 12 bushels to 15 bushels, in the 25 years from 1890 to 1914. As a result, production

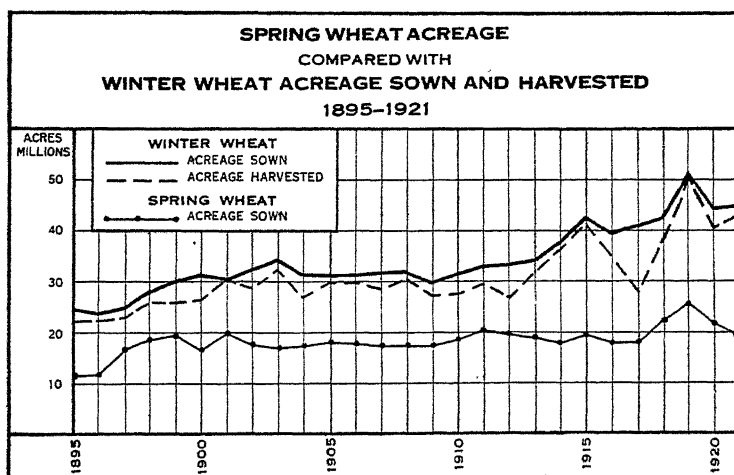


FIG. 63.—The acreage of winter wheat sown is larger than that of spring wheat and has tended to increase faster both before and during the World War.

increased steadily. The average acreage harvested in the 10 years before the war (1905-1914) was about 48 million acres, of which over 18 millions were spring wheat and nearly 30 millions were winter wheat (Fig. 63). As the average abandonment of winter wheat acreage sown was about 8.5 per cent in those years, nearly 33 millions of acres of winter wheat were sown annually.

During the World War acreage and production were greatly stimulated by patriotic impulses and by high prices. At the same time average acre yields decreased slightly, probably on account of unfavorable seasons and less ade-

quate farming methods due to the decreased labor supply. The enormous total of 75,684,000 acres was grown in 1919, but this dropped to somewhat more than 61 million and 62 million acres, respectively, in 1920 and 1921. Further decrease in acreage perhaps may be looked for, but every effort should be made to maintain high acre yields.

The increase in winter wheat acreage since 1911 has been proportionately greater than that of spring wheat. In 1919 the acreage of winter wheat harvested was 50,494,000 acres, in 1920 it was 40,016,000 acres, and in 1921 it was 42,702,000 acres, after decreases of about 2, 11, and 5 per cent, respectively, caused by winterkilling, had been subtracted. This means that about 45 million acres of winter wheat were sown for both 1920 and 1921, compared with an average of about 33 millions in the 10 years from 1905 to 1914.

The preliminary estimate of the acreage of winter wheat sown in the autumn of 1921 for the crop of 1922 is 44,293,000 acres, or scarcely any decrease from 1920 and 1921. However, unfavorable conditions in the autumn and winter, especially in the central part of the Great Plains area, have greatly injured the plants, and an average abandonment of 14.4 per cent has been estimated. This unusually high abandonment reduces to 38,131,000 acres the area of winter wheat estimated to be remaining for harvest in 1922, an area, however, which is still 5 million acres larger than the prewar average.

During the 20 years from 1898 to 1917, inclusive, the acreage devoted to spring wheat was fairly constant, with an average of 18,015,000 acres annually. The 20-million mark was reached only in 1911. The lowest acreage recorded in this period was 16,259,000 acres in 1900. In 1918 and 1919 the acreage was increased to 22,051,000 and 25,200,000 acres, respectively. In 1920 it dropped to 21,127,000 acres and in 1921 to 19,706,000 acres, which was still about 10 per cent above the prewar average.

Unfavorable spring conditions have much retarded the sowing of spring wheat in 1922. Probably this will result in a decreased acreage. If this proves to be true, and the facts will be known before this is printed, a decreased production of spring wheat is probable in 1922, which will be one factor in obtaining a better price.

With about $4\frac{1}{2}$ million acres less of winter wheat remaining for harvest in 1922 than were harvested in 1921, and with a probable decrease in acreage of spring wheat in 1922, a decreased production of all wheat seems likely to result.

Domestic Use of Wheat.

Most of the wheat crop of the United States is consumed annually within the country (Fig. 64). A small percentage of the crop is used for seed; a varying quantity is exported; and the remainder, also variable in quantity, is held in the country as carry-over from year to year.

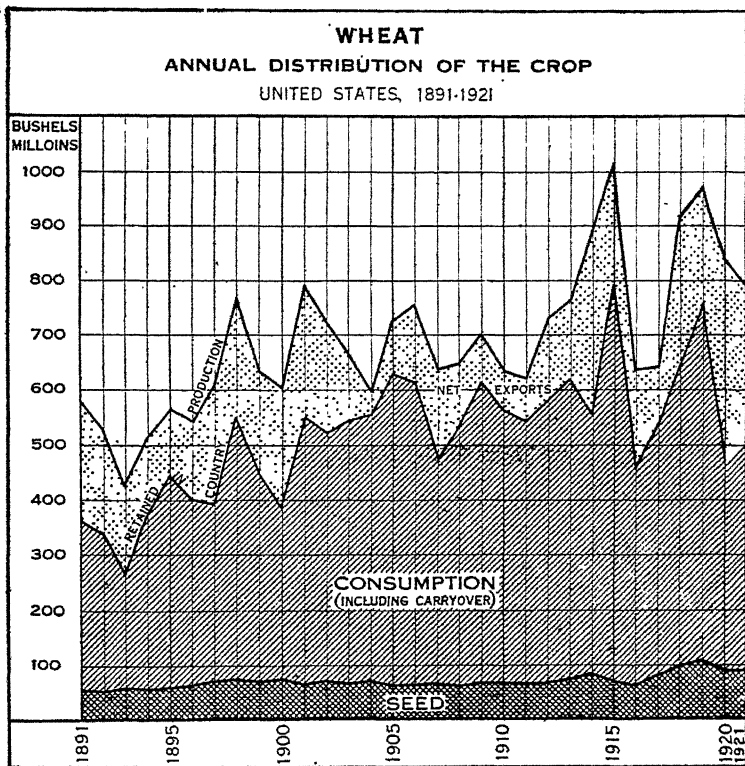


FIG. 64.—Disposition of the American wheat crop in the last 30 years. Compare with same factors on a per capita basis in Figure 71.

The total consumption can not be determined directly, but only by subtraction of all other items. It varies slightly, no doubt, from year to year in relation to the price of flour and the general condition of business and employment. Consumption increases with total population, of course, and per capita consumption is increasing also. During the war consumption was decreased by the use of wheat substitutes, but that was only a temporary condition.

Carry-over, also, can not be determined accurately by direct methods. In a long period of time it becomes increasingly negligible, as the carry-over of one year is eaten or exported in the next. At the end of 25 or 50 years, there-

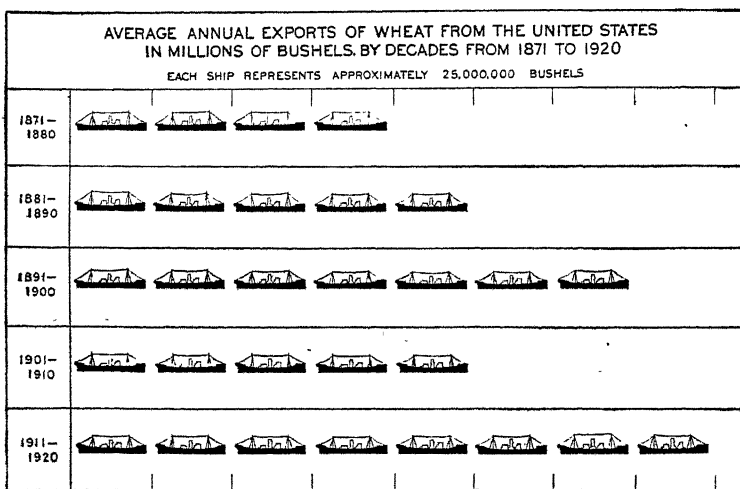


FIG. 65.—Wheat exports increased steadily in the 30 years from 1870 to 1900, decreased in the next 10 years, and increased enormously in the last 10 years, stimulated by war-time needs.

fore, only the final carry-over need be considered, and the consumption is found by subtracting the total seed requirements and exports. These trends, reduced to this average condition, are shown later on a per capita basis in Figures 71 and 72.

Exports.

The United States has exported a surplus of wheat in every year of its history, except 1836. International trade in wheat on a large scale may be said to have begun in 1850, in which year the repeal of the British Corn Laws went into

effect. At this time practically all of the wheat of the United States was produced east of the Mississippi River, and there usually was not a large quantity available for export. The trend of exports by decades since 1871 is shown in Figure 65 and by years since 1849 in Figure 67.

The Civil War cut off the southern market for northern wheat, and a good demand in Europe at the same time caused a large increase in the exports during those years. Following this war there were a few years of small exports, but by 1869 they had returned to the Civil War level. Exports increased rapidly from 1866 to 1880, after which there was a decline until 1890. This was followed by a period of large exports until 1902. From 1878 to about 1902 was the great surplus-producing period of the development of wheat production in the United States. From 1903 to 1913 the exports were much less than in the previous decade (Fig. 67).

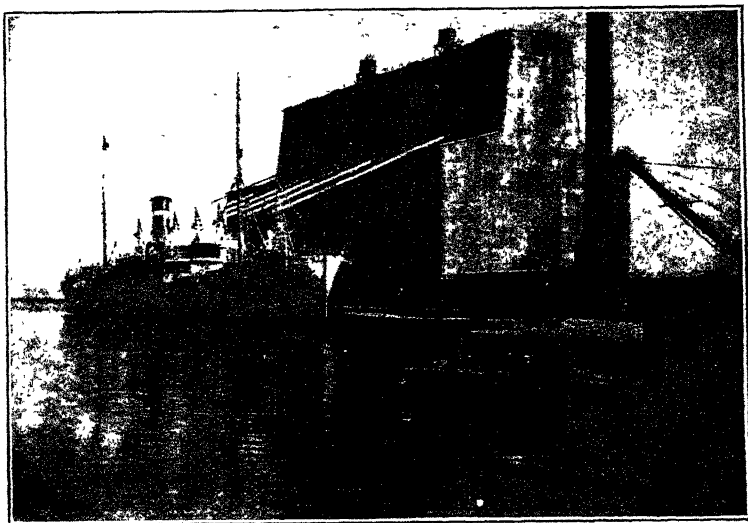


FIG. 66.—Wheat being delivered through spouts from the bins of a water-front elevator into the hold of a steamer, for export. Wheat for export is loaded into ships at ports on the Great Lakes, the Gulf of Mexico, the Atlantic Ocean, and the Pacific Ocean. At Pacific Coast ports, much of the wheat still is handled in bags instead of in bulk.

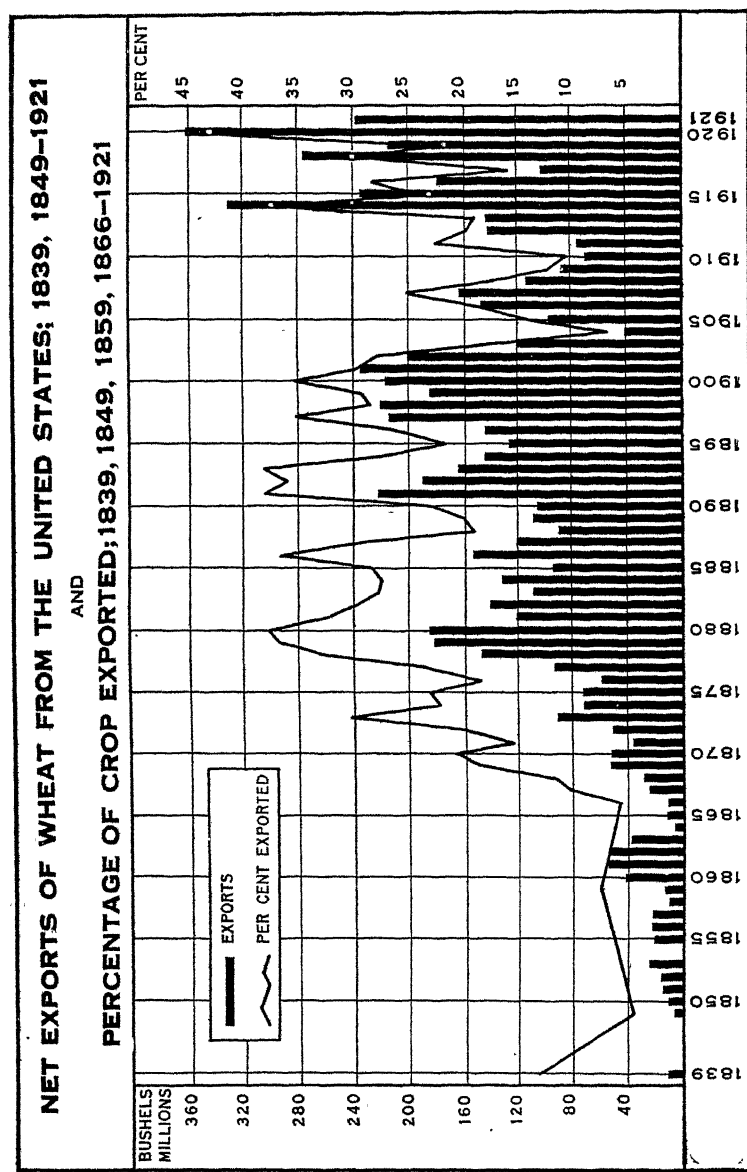


FIG. 67.—Exports vary much more than production, depending partly on foreign demand. In general, rapid extension of wheat production in the last quarter of the last century caused high exports, representing a high percentage of our total production. After a decade of decline the World War stimulated still greater exports but no larger percentage of the total.

The exports of the recent war period seem very large, but in percentage of the total of the crops produced they have not been greater than the exports of the period from 1880 to 1900. It is probable, however, that the future will show a continuation of the prewar trend of the years 1903 to 1913, inclusive.

International Trade in Wheat.

All the countries in the world are tied together through international trade in wheat (Figs. 68 and 69). The annual surplus from the great producing countries is poured into the consuming countries which do not produce enough to supply their own needs. Russia has been our greatest competitor in production and the United Kingdom our greatest buyer. The effect of the war upon the movements in wheat may be seen by comparing the movements in 1920 with the average movements in the five-year prewar period, 1910-1914, inclusive. The biggest and most significant change is the elimination of Russia as a producing country. Lack of the Russian surplus was made up by increases in production in the United States, Canada, and Argentina. The great reduction in India is due to a poor season in 1920, and the same was true in 1919 also. A most important economic question is how the future demand for our wheat will be affected by the return of Russia to her former place in international trade. Will Russia come back, and how rapidly? The question of how far Canada, Argentina, and India can continue to increase their acreage and production also is very important to us.

Population and Future Production.

Since Colonial times the United States has been an exporter of wheat. For nearly half a century our wheat exports have been large in quantity and very important in our total international trade in agricultural products (see Figs. 2, 65, and 67). During the last 20 years, however, the volume of these wheat exports has been decreasing, except under the artificial stimulation of the recent war period.

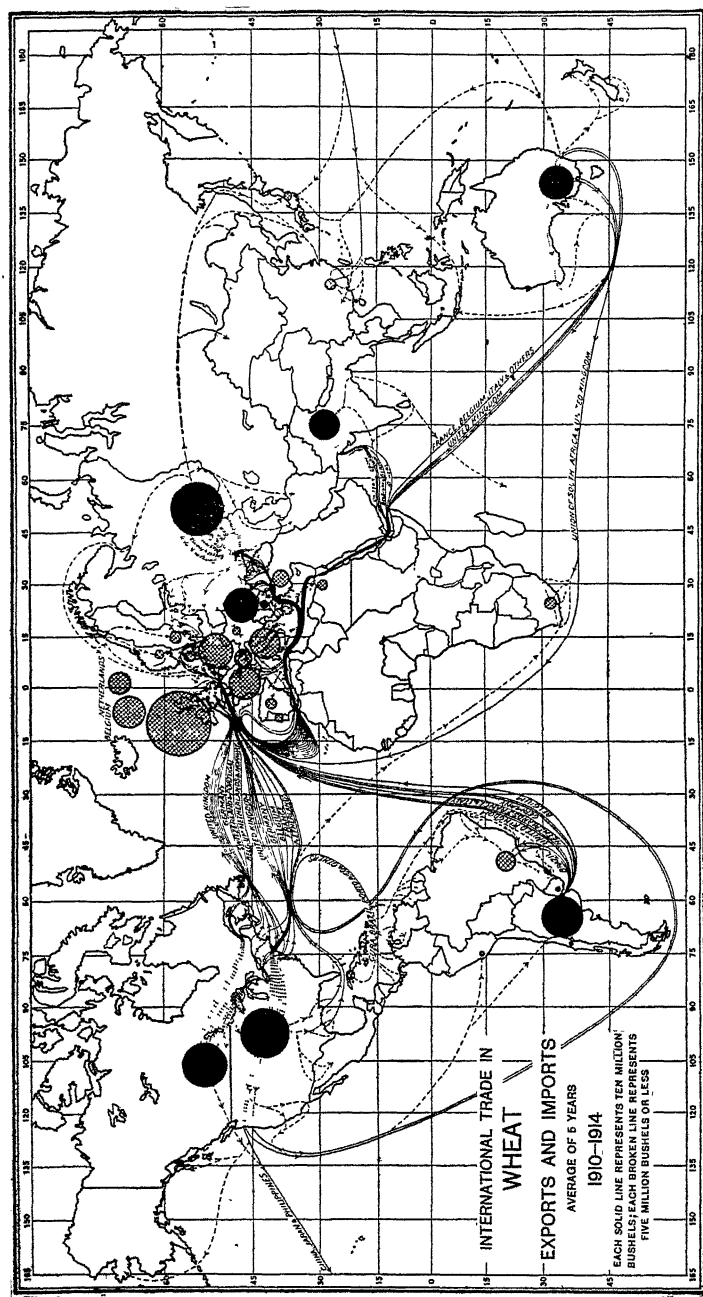


FIG. 68.—International trade in wheat before the World War, showing surplus production, trade routes, and destination. The two hemispheres are fairly well balanced in production. Western Europe is the great purchaser. Exports are represented by solid black circles; imports by shaded circles.

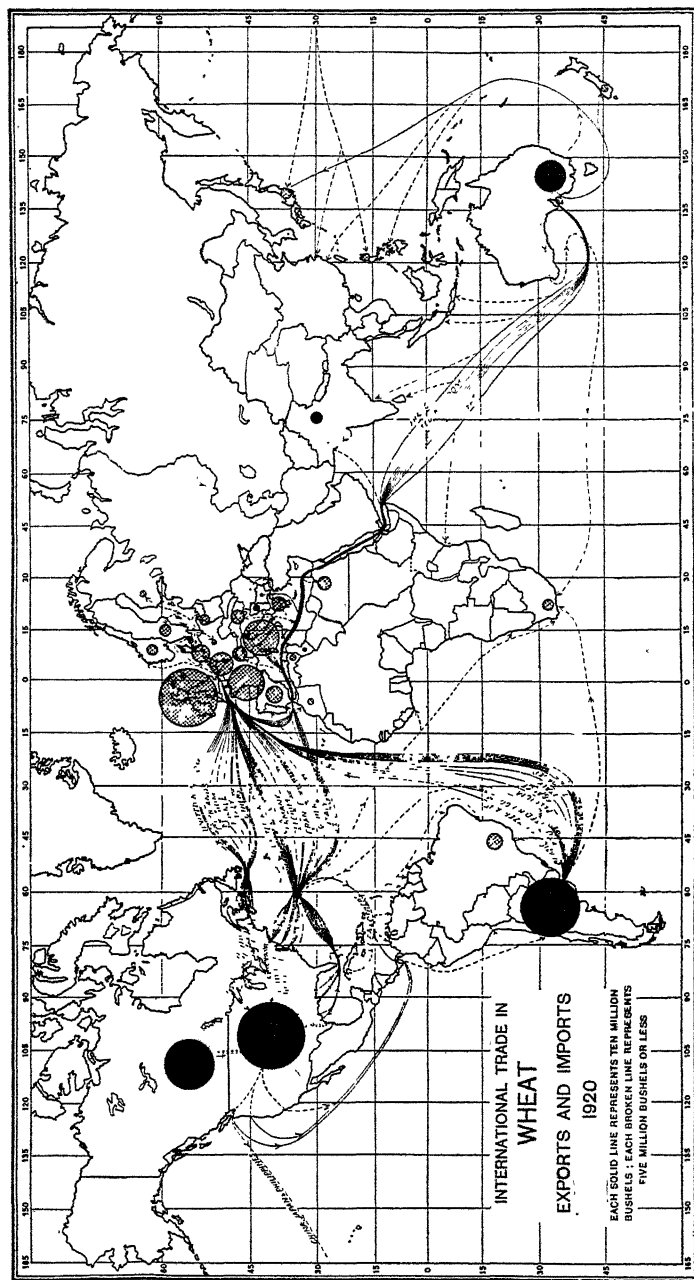


FIG. 69.—International trade in wheat after the World War, showing surplus production, trade routes, and destination. The western hemisphere has greatly increased its production, while production in the eastern hemisphere has enormously decreased. Russia and Hungary produce no surplus, while India has had two bad crop seasons.

This decrease has been due chiefly to our steadily increasing population (Fig. 70) and the lack of new lands suitable for profitable wheat production under present conditions.

Increase in population has been due partly to births and partly to immigration. The birth rate is affected somewhat by economic conditions in this country. Immigration is affected by legislation here and by economic conditions here and abroad. Without question our population will continue to increase, though the rate will be governed by the factors named. Increasing population will require a proportionately increasing supply of wheat. Wheat production, however, has been increasing less rapidly than population in this country, and it is very probable that this will continue to be true, at least until we reach the point where we consume practically all we produce.

Per capita consumption of wheat in this country has been increasing steadily during the last 80 years at least (Figs. 71 and 72). This has been due partly (1) to great improvement in milling processes, which make bread more attractive; (2) to increasing prosperity, which enables more people to eat white bread; and (3) to an increasing proportion of our population in cities.

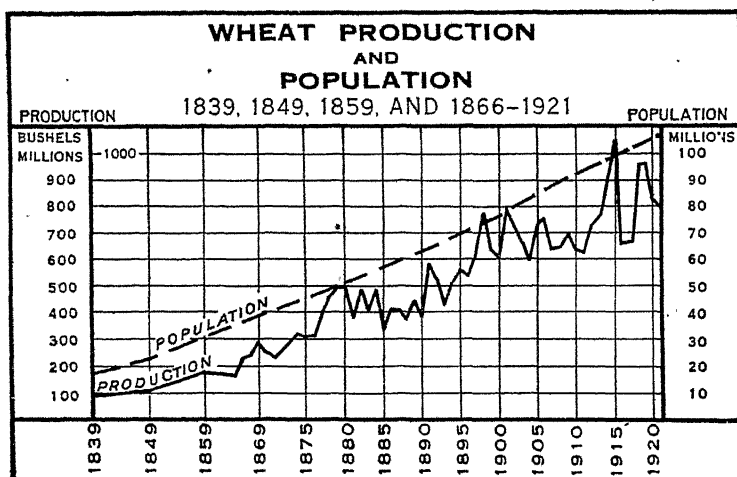


FIG. 70.—Population has increased more rapidly in the United States in the last 20 years than has wheat production, in spite of enormous production during the World War.

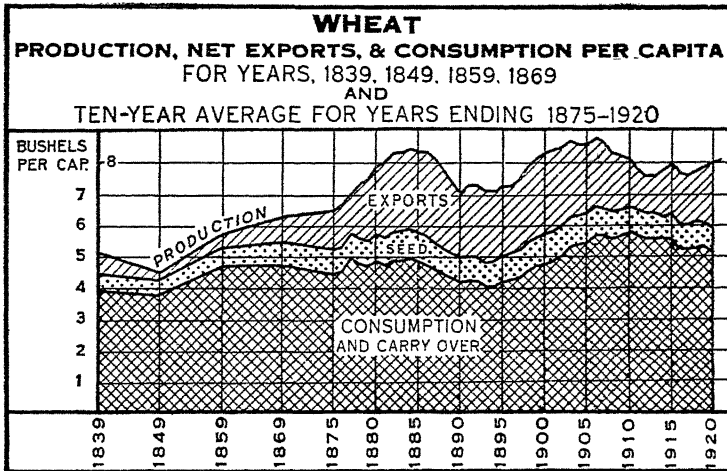


FIG. 71.—On a per capita basis consumption is increasing and production and exports are decreasing.

It is certain that city dwellers consume more wheat per capita than do those who live in villages and in the country. This probably is due in part to the lack of gardens in cities and in part to the comparative cheapness of bread and the further fact that no cooking is required. The proportion of the total population living in cities is increasing rapidly, which is a factor in the present and future trend of wheat consumption.

Per capita consumption increased (Fig. 72) from 3.8 bushels, the average of 1839 and 1849, to 4.9 bushels as the average from 1875 to 1884, and to 5.6 bushels as the average from 1905 to 1914. This rising trend, interrupted by the World War, doubtless now has been resumed. How much longer will it continue? In some countries of Europe, especially Belgium and France, per capita consumption has risen to about 8 bushels of wheat annually.

With increasing population, increasing per capita consumption, and decreasing per capita production (Fig. 72), there is a steadily increasing demand for our wheat at home. In comparatively a few years, if present trends continue, we shall be eating all that we produce. Of course production

can and will be increased if the prices paid for wheat will make such increase profitable. The greatly increased wheat production during the war, occurring under the stimulus of very high prices and patriotism, was partly at the expense of well balanced rotations and other principles of sound farming. As wheat prices become better in future, production can be increased through the use of more fertilizer and the farming of less productive land. As production and consumption tend to become equal new sources of supply must be sought in order to feed the increasing population. The needed supply may be grown at home or imported from Canada, Argentina, and other countries where lands and labor are cheaper than in the United States.

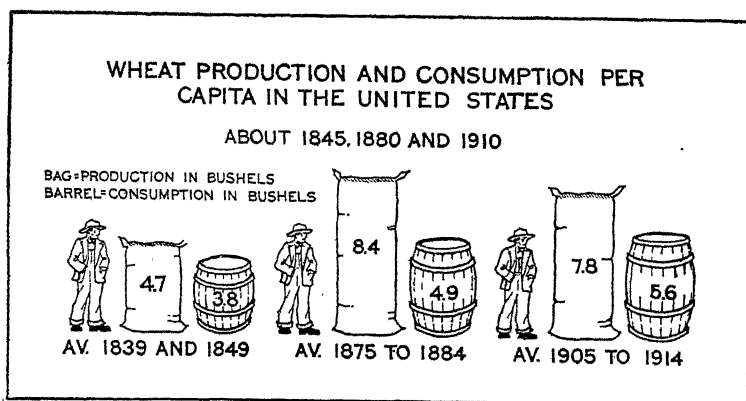


FIG. 72.—Per capita production has reached its maximum and is slowly declining, while per capita consumption slowly rises.



By C. E. LEIGHTY and C. W. WARBURTON, *Agronomists, Bureau of Plant Industry*, and O. C. STINE and O. E. BAKER, *Agricultural Economists, Bureau of Agricultural Economics*.



THE corn crop is considered in this article from a broadly economic standpoint, principal attention being given to those things which determine its profitableness to the farmer, and to showing the steps by which corn has come to occupy the place it holds in the world to-day.

The Importance of Corn in the United States.

Unknown to the world before the discovery of America, corn stands to-day the equal in world production of any other cereal. An important crop in many countries of the world, it is first and foremost an American crop. Grown in every State of the Union, it reaches its true preeminence in the Corn Belt, that strip of productive land stretching from Ohio westward to the Missouri and beyond.

Corn is the most important crop in the United States both in acreage and in value. Corn growing is the work of millions of farmers, and about a hundred million acres of our land are planted to corn each year. It is especially important in nearly all the eastern portion of the United States, as shown in Figure 1. In the western and extreme northern portions of the country corn is not an important crop, owing chiefly to climatic conditions unfavorable to its growth.

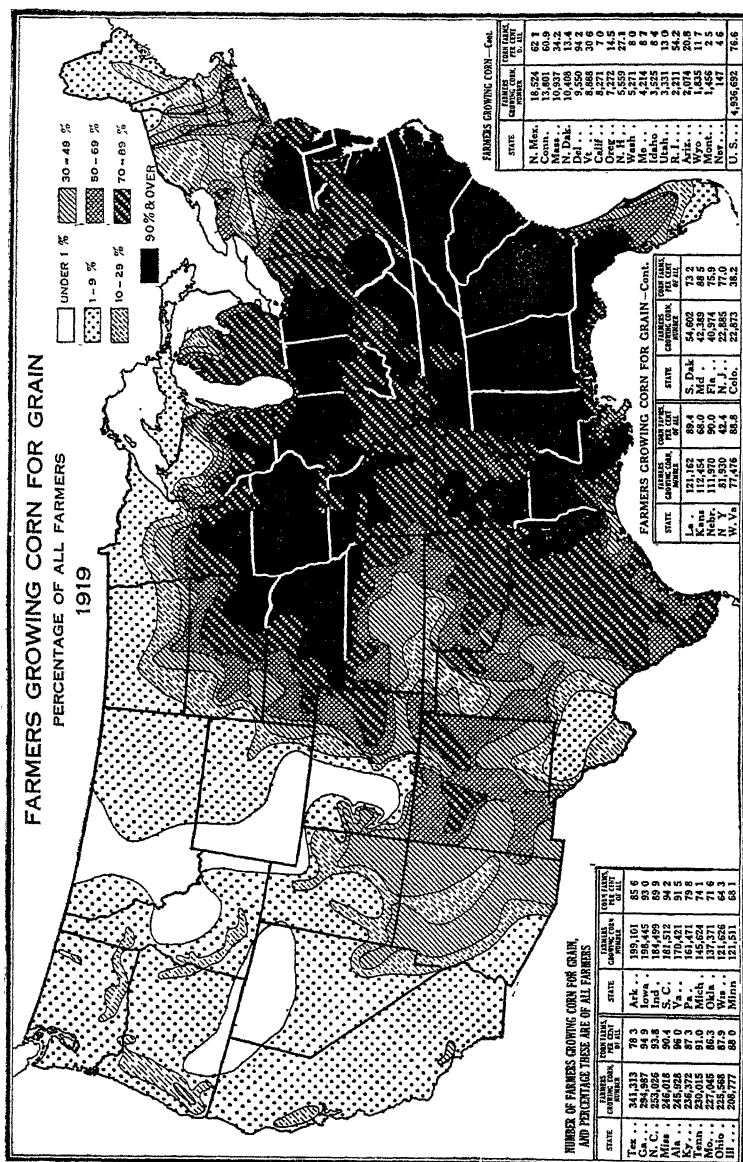


FIG. 1.—In the blackened areas corn was grown for grain on more than 90 out of every 100 farms in 1919. As the shading becomes lighter a smaller percentage of the farms produced corn for grain. Only in the Rocky Mountain region and in certain other small areas of the far West is corn practically unknown as a crop.

Of the 6,448,343 farms in the United States in 1919, 4,936,692, or more than three-fourths, are reported by the 1920 census as producing corn. With a corn acreage (not including corn cut for forage or silage) of 87,771,600 acres, this is an average of about 18 acres of corn on each farm producing it. Whatever influences the corn crop, then, whether it affects the growing corn or the harvested crop, and whether it be weather, costs, or prices, must concern very many people.

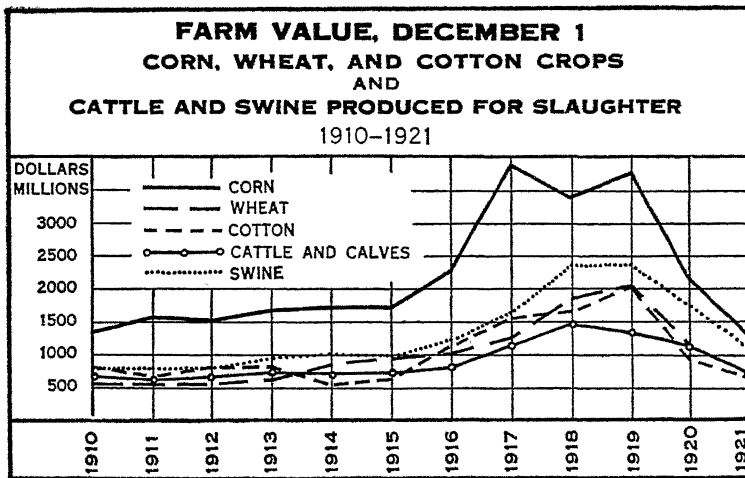


FIG. 2.—The value of the corn crop in the United States is usually about double the value of the wheat or cotton crop, and about equals the combined values of the cattle and swine slaughtered. In 1920 and 1921, however, the value of swine slaughtered was nearly as great as the corn value.

Relative Value.

The value of the corn crop to the American farmer is greater than the value of any other crop grown in this country. In 9 of the last 12 years (Fig. 2) the value of corn has been greater than the combined values of wheat

and cotton. In 8 of these years the value of corn has been greater than the combined values of all cattle and swine produced for slaughter. The farm value of swine produced for slaughter has been second to the value of corn in every year since 1910.

The average value of corn in the pre-war period, 1910 to 1914, was \$1,577,000,000 annually. The higher prices from 1915 to 1919 raised the average annual value of this period to the stupendous sum of \$3,024,000,000. The 1920 crop, the largest ever harvested, was valued at \$2,150,000,000, prices having fallen from the war-time figures. The 1921 crop, which was only 4 per cent less than the record crop of the previous year, was valued at only \$1,303,000,000 or 13 per cent of the annual value during the war period, and approximately one-sixth less than the pre-war value, although the crop was one-tenth larger than the pre-war average. The other crops and animal products increased in value during the war and decreased in 1920 and 1921, but not to the extent that the value of the corn crop decreased.

Uses.

The hog is the largest direct consumer of corn. It is estimated that 40 per cent of the total crop is fed to swine on farms. Horses and cattle, it is estimated, account for 20 per cent and 15 per cent, respectively. The next largest use of corn is for human food, 10 per cent of the crop being consumed on farms and ground in merchant flour mills (principally for food). The percentage of the crop used directly for food appears small, but, considering our large production, corn is seen to be an important food. Other details regarding uses of corn are shown in Figure 3. The outstanding use of corn is as a feed for animals, more than 85 per cent of it being used in this way. The exports of corn as grain are almost negligible.

In addition to the use of corn as grain the plant is used extensively in the form of silage, fodder, and stover, as feed for animals. In recent years, according to estimates by the Bureau of Markets and Crop Estimates, nearly 4 million acres of corn each year have been made into silage.

More than 2½ million acres of corn are cut for fodder, while large use is made of the stalks as feed for animals. More than 2 million acres have been grazed or hogged off each year for the last few years.

The corn crop and the swine and cattle populations are intimately interrelated. With the exception of limited areas from which corn is largely sold as grain, because of the proximity of markets, swine are found most abundantly where corn production is greatest. In these areas, too, the finishing of cattle for market is a prominent industry. The six States, Iowa, Illinois, Nebraska, Missouri, Indiana, and Ohio, producing 48 per cent of the corn in 1921, had within their borders about 45 per cent of the swine of the country and over 25 per cent of the cattle other than milk cows on January 1, 1922. In addition these States produced 32 per cent of the chickens and 35 per cent of the hens' eggs produced in the United States in 1919.

Corn, therefore, consumed either directly or in the form of meat and other animal products, is the principal source of food of the American people.

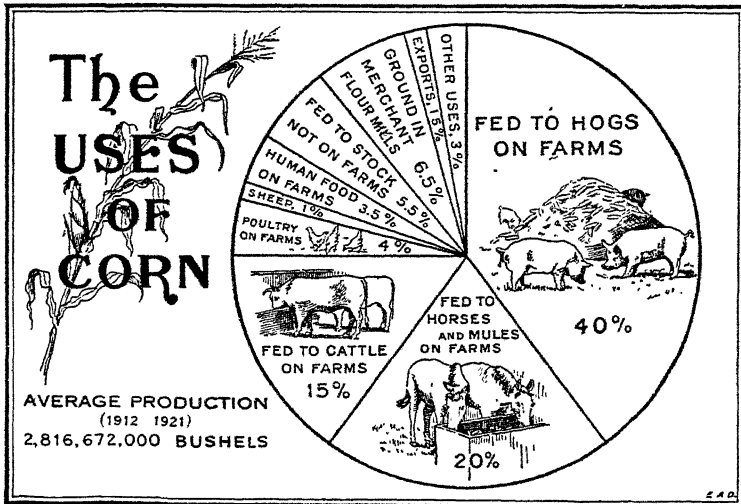


FIG. 3.—The uses of corn harvested for grain in the United States, based on estimates by the U. S. Department of Agriculture. More than 85 per cent is fed to live stock and somewhat less than 10 per cent is used directly for food.

The World Production of Corn.

The United States produces about three-fourths of the corn crop of the world. There are no large competing countries, but corn is an important crop in Argentina, Brazil, Mexico, and some of the southern European countries. Argentina is the most important of the competing countries because of the fact that a large part of the Argentine crop is exported. There is no area in the rest of the world, however, comparable to the Corn Belt of the United States. Mexico probably has a larger proportion of its cultivated land devoted to corn production than any other country. Most of the corn is grown in small patches of a few acres, partly under irrigation, and is produced chiefly for human food.

World production is shown in Figure 4.

The total production of corn in Europe amounts to about one-fourth of the production in the United States. Italy, the Balkan countries, Hungary, Spain, and Portugal are the important corn-producing regions. Southern France also produces some corn. In the region westward from the Black Sea, including Rumania and the Hungarian plain, the rainfall, temperature, and soil conditions are similar to those of our Corn Belt, and corn is one of the chief crops, being used largely for food and also exported. Corn in Egypt and India is grown under irrigation, and is an important crop locally in these countries.

The geographic range of corn is limited by conditions of temperature, rainfall, and length of growing season. The northern and the southern limits of corn production practically have been reached, but may be extended slightly by developing varieties that will mature earlier, and by growing corn for silage or green fodder. Corn can be grown without irrigation only in areas where there is a considerable amount of summer rainfall. Temperatures both night and day must also be high during the growing period. These conditions exclude corn from a considerable part of the area lying between the northern and the southern limits of production but there remains a large potential area in which corn growing can be developed.

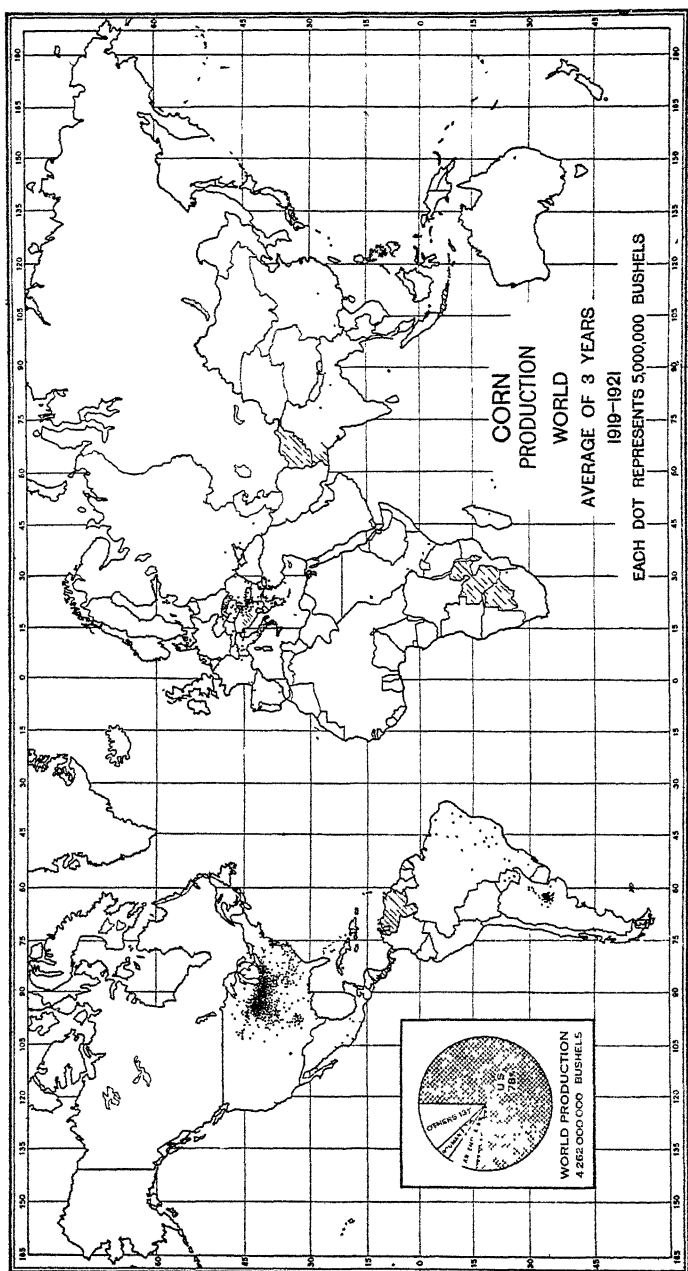


FIG. 4.—The United States produces three-fourths of the corn crop of the world. Corn is an important crop in Argentina, Brazil, Mexico, South Africa, India, and southern Europe. Its northern limits are found between 45° and 50° latitude north, and its southern limits between 30° and 40° latitude south. Quantity and distribution of summer rainfall are important factors in production within these limits.

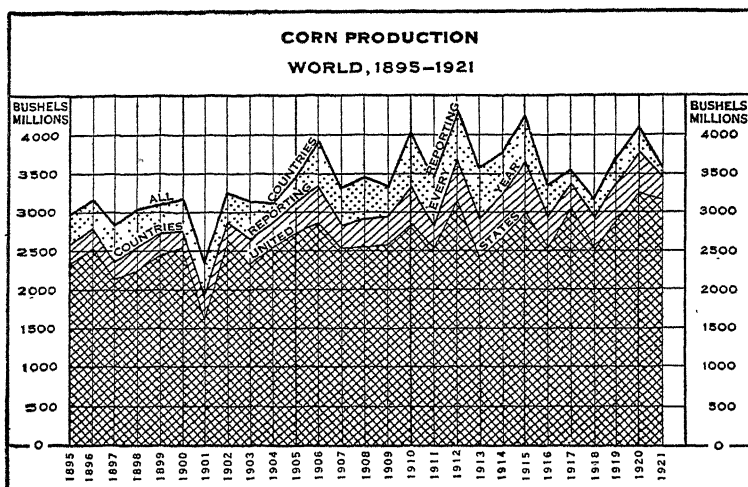


FIG. 5.—The countries reporting every year, 1895–1921, make up the great bulk of the world's total production. These countries are the United States, Canada, Argentina, Uruguay, Chile, France, Italy, Spain, Algeria, Egypt, Union of South Africa, and Australasia. World production varies with production in the United States.

The corn production of all countries reporting has increased from about 3 billion bushels annually, in the period 1895 to 1897, to over $3\frac{1}{2}$ billion bushels annually in the last three years. (Fig. 5.) The United States produces such a large part of the world crop that the trend of world production is determined very largely by the trend of production in the United States. The fluctuations in world production from year to year follow the fluctuations in this country. When we have a short corn crop the world crop is short because it is not possible for high yields in other countries to make up for low yields in the United States.

Production in the United States.

The corn crop of the United States in 1921 was the third largest ever produced, having been exceeded only by the crops of 1920 and 1912. The area planted to corn in 1921 was about the same, however, as the average for the last 20 years, the immense crop being the result of an acre yield far above the normal average. Acreage, yield, and production in the United States since 1866 are shown in Figure 6.

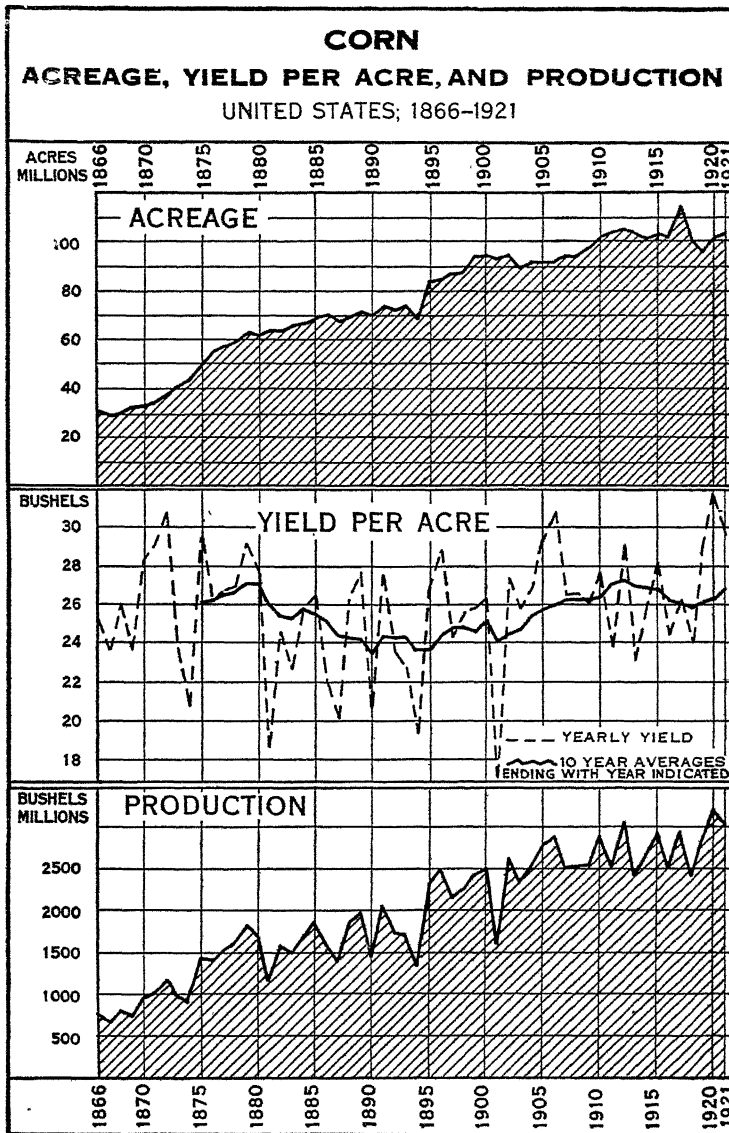


FIG. 6.—Acreage and production of corn have increased rather steadily since 1866. Production has fluctuated from year to year much more than acreage, because it depends not only on acreage but also on yield per acre, which has fluctuated largely in different years. Upward and downward trends, however, have occurred in yield per acre.

The area planted to corn has increased steadily from 1866 to the present time, being about three times as large now as at the beginning of this period. The expansion has been more rapid in certain periods than in others. The most rapid expansion was that between 1894 and 1899. An unusually large acreage was planted in 1917. This was due in large part, however, to the reduction in wheat acreage by winter killing, and in 1918 the area planted dropped back to about the average for the previous 10 years. From the trend of corn acreage since about 1910 it might be inferred that we have reached a point from which there will be little or no expansion in the future. It should be noted, however, that we have passed through one such period of stable acreage—1899 to 1908—after which there was a decided increase. We no longer have large areas of unoccupied land to add to the corn-producing area, but within the limits of present production considerable increases in corn acreage could be made without substantially reducing the acreage of other crops, excepting possibly pasture.

The production of corn depends both upon the acre yield and upon the area planted. The fluctuations in production from year to year, however, are almost solely due to variations in acre yield. In the entire period for which statistics of average annual yields are available, high yields have never occurred in more than three successive years. Relatively very low yields occur from time to time. The lowest yield was 17 bushels, reported for 1901, and the highest 31.5 bushels, in 1920. The trend of the acre yields was downward from 1880 to 1895 and upward from 1895 to 1913. At present there seems to be a fairly well defined tendency to increase the average acre yield, but the period has not been long enough to determine how much of this increase is due to weather conditions, and how much to other factors. Probably a part of the increase in acre yield is due to better cultivation and to a reduction of the acreage in areas where the crop is uncertain, as in parts of Kansas and Oklahoma.

Being the result of area planted multiplied by acre yield the production of corn shows the characteristic tendencies of both. It fluctuates annually with yield, while the tendency toward expansion or stability is determined more largely by the area planted. The large production of the

last 3 years was due not to unusual areas planted, but to unusual yields. Larger production may be obtained in the future either by increasing the area planted or by means of higher acre yields resulting from the use of better seed, better cultivation, and more fertilizer.

Historical Development.

Corn was the earliest cultivated crop on the American farm. When the first colonists settled in Virginia and in Massachusetts they found the Indians producing corn and preparing various foods from it. The Indians taught the colonists how to plant, cultivate, and utilize it. The spade and the hoe were the only tools used at first, but English plows were soon introduced.

The Virginia colonists planted 30 or 40 acres in 1609, and about 500 acres in 1614, while in 1631 there was a surplus of corn to export. The Massachusetts colonists planted their first corn in old Indian corn fields and fertilized with a fish in each of the hills. Corn was the most important crop

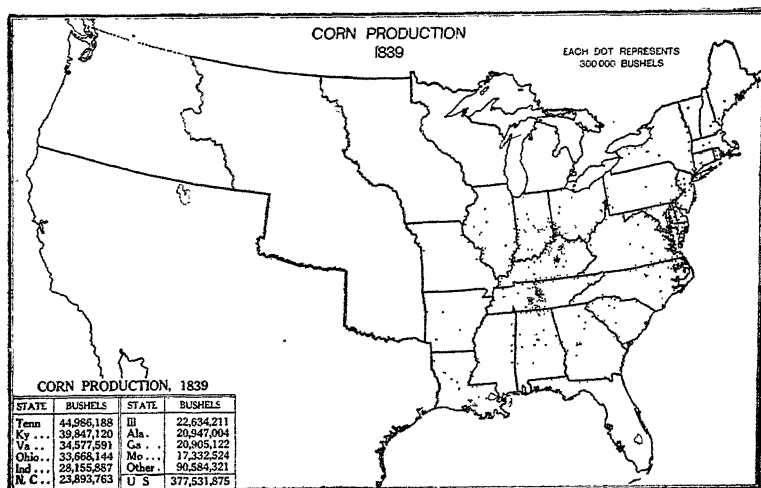


FIG. 7.—Corn was an important crop in the seaboard States in 1839, but production was most intense in central Tennessee, the blue-grass region of Kentucky, and the Scioto, Miami, and Wabash Valleys. Most of the present Corn Belt was only sparsely settled. The total production in 1839 was 377,000,000 bushels.

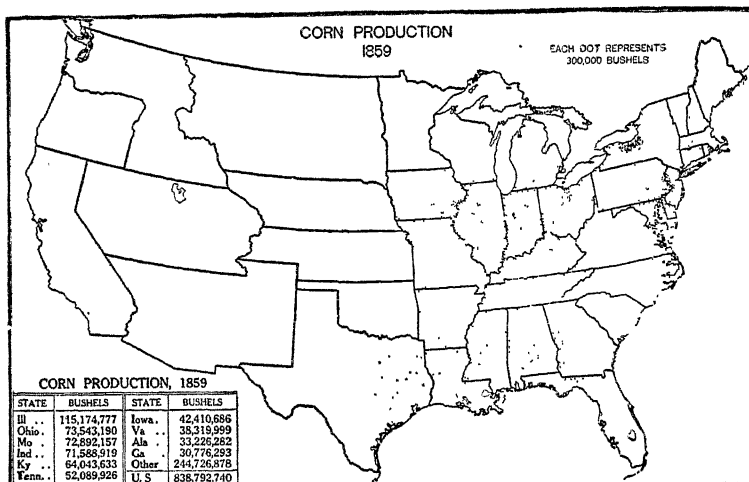


FIG. 8.—Corn production more than doubled from 1839 to 1859. Illinois, Iowa, and other prairie States became important producers. Total production in 1859, according to the census of 1860, was 838,792,740 bushels.

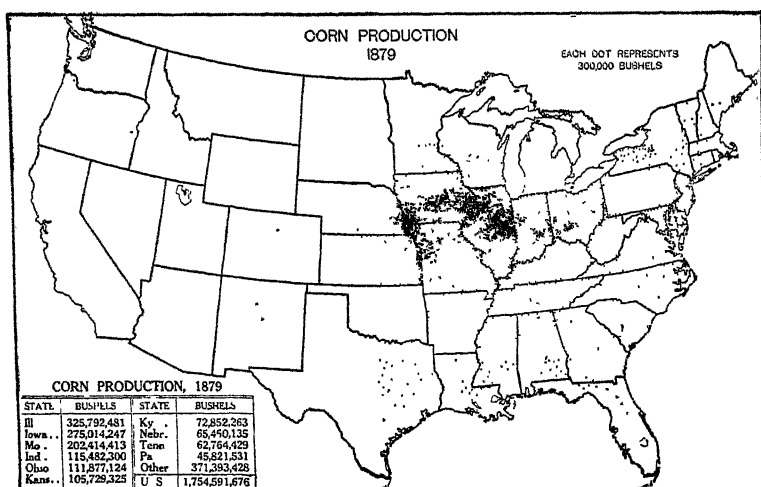


FIG. 9.—Corn production in 1879 was centered in Illinois, Iowa, and Missouri, nearly one-half of the crop being produced in these three States. Kansas and Nebraska were developing rapidly as corn producers. The Corn Belt had come into existence. Corn growing had pushed westward and northward. Large quantities of corn could be produced more cheaply on the prairies than in the forested regions. Total production in 1879 was 1,754,591,676 bushels (census figures).

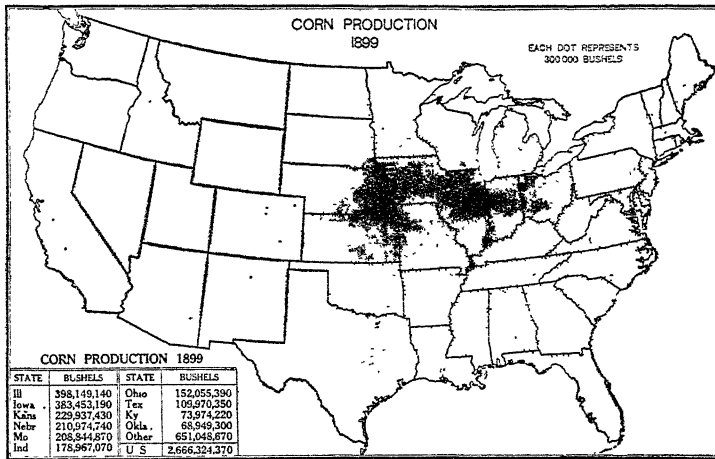


FIG. 10.—Corn production in 1899 had become more intense in several States, but especially in the Missouri River Valley. The Corn Belt had developed westward and northward. Total production in 1899, according to the census of 1900, was 2,666,324,370 bushels. The average production per person in the United States had increased from 26.7 bushels in 1859 to 35.1 in 1899.

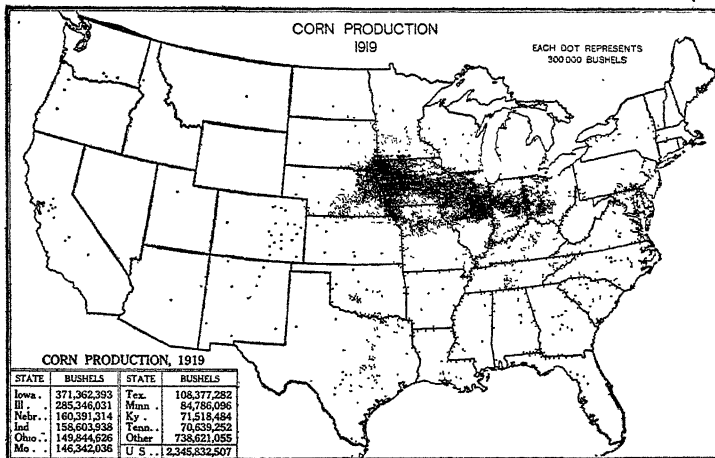


FIG. 11.—Corn production in 1919 amounted to 2,345,832,507 bushels. This is a reduction from the production of 1899. Corn cut for forage and silage increased very largely in this period, the acreage cut for forage, in 1919, being reported as 14,502,932 acres. Large decreases in production occurred in the Corn Belt, especially in Kansas, Illinois, Missouri, and Nebraska.

of the early settlers because (1) acclimated seed was available, (2) it furnished food for man and for animals, and (3) it was the most adaptable and best yielding crop for newly cleared land.

The westward movement of corn production began immediately after the close of the Revolutionary war. The rich lands of Tennessee, Kentucky, and the Northwest Territory were settled by immigrants from the seaboard, who raised corn and marketed it mostly in the form of whisky and livestock. These were the most important corn-producing areas in 1839 (Fig. 7), although the western frontier of corn-production had already crossed the Mississippi River.

A period of depression in the West following the panic of 1837 had ended by 1845. A period of prosperity and rapid development followed. Corn production more than doubled in the 20 years from 1839 to 1859 (Fig. 8). This was due to the rapid settlement of the prairie States, a large number of foreign immigrants coming to reenforce the strong western movement of our native population. Steel plows, first made about 1837, quickly came into use and facilitated the breaking of the prairies. The railroads by their rapid and extensive development aided this great western movement, carrying the pioneers westward and furnishing transportation for the products and supplies of the settlers. Exports of corn increased rapidly.

The Civil War retarded development during the sixties and less corn was reported in the census of 1869 than in 1859. Rapid expansion took place in the following years. The first crop to reach a billion bushels was in 1870, and no crop has been less than a billion bushels since 1874. Returning soldiers of the Civil War gave further impetus to the settlement of the prairies and improved machinery came into use. The acreage in corn increased from 44 million to 62 million acres in the 5 years from 1875 to 1880, and the average corn product per farm doubled in the decade 1869-1879. By 1879 the Corn Belt was rather well defined (Fig. 9).

Beginning with 1876 there was a very great increase in the exports of both corn and meat products. The decline in freight rates about this time favored the transportation of farm products from the Corn Belt. The methods of culture in the West improved as the machinery improved, and as land

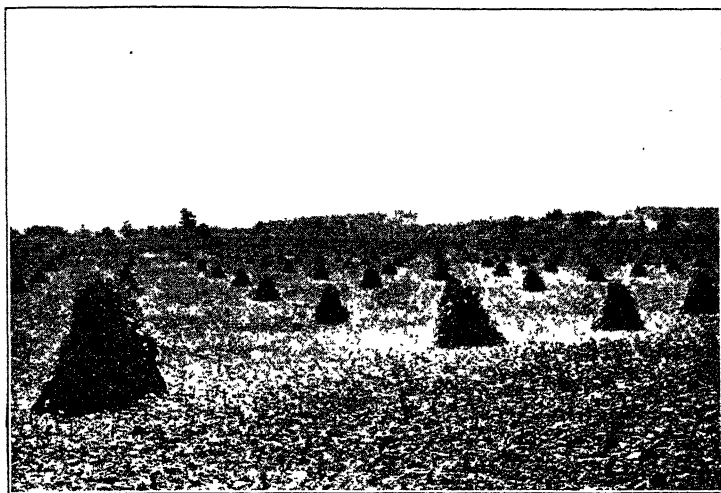
values rose more intensive cultivation was encouraged. Corn breeders developed improved varieties, the growing of which increased the yields. The limits of the Corn Belt were extended and corn was pushed somewhat farther into new territory. Acreage in 1899 was one-half larger than in 1879, although production increased only one-third, owing to lower acre yield in 1899 (Fig. 10).

The acreage of corn in Oklahoma increased more than 3 million acres in the decade from 1899 to 1909. This increased acreage did not prove to be permanent, however, and in 1919 the acreage of corn was about the same and the production less than in 1899, while wheat increased over 3½ million acres in the State from 1899 to 1919. The demand and guaranteed price for wheat during and immediately following the World War and the scarcity of labor resulted in marked increases in the wheat acreage and decreases in corn acreage in many other States. The full effect of this tendency was felt in 1919 (Fig. 11).

In the period from 1899 to 1919 some adjustments were made in corn acreage, land less well suited to corn going to other crops; better cultural methods and better seed have gradually been coming into use. These changes are evidenced by the acre yield, which increased from an average of 24.1 bushels in the period 1890 to 1899 to 26.1 bushels in the period 1910 to 1919. The various agricultural colleges and experiment stations and the U. S. Department of Agriculture have done much in recent years to maintain and to increase the yield of corn per acre.

The Corn Belt.

As corn growing developed in the United States it was learned by experience that corn could be grown in some areas to better advantage than in others. Acreage soon became largest and production most intense in the more favorable areas. A rather indefinite strip of land, varying from time to time, extending from southwestern Ohio to southeastern South Dakota, and thence southward along the Missouri River, developed corn growing most intensively and has become known commonly as the "Corn Belt." In some places the limits of the belt are more or less definite, as in southern Illinois, where there is an abrupt change in soil type which traces back to the glacial period. In other



Fodder in the Shock.

FIG. 13.—Corn cut and shocked in preparation for sowing winter wheat.
A practice common in East Central States.

teams free at times in the year when they can be employed to advantage in seeding and harvesting small grain and hay, but employs them at times when it is necessary to plant, till, and harvest other intertilled crops like kafir, tobacco, beans, and potatoes. Besides being supplementary to corn, from the standpoint of providing employment to men and teams at certain times of the year, small grain and tame hay and pasture grasses supplement corn in feeding livestock and maintaining soil fertility.

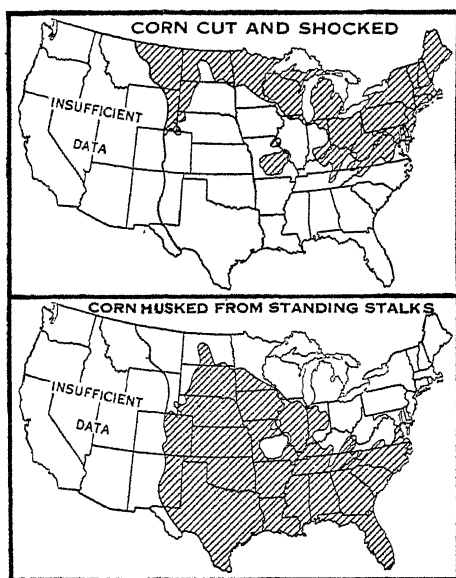
The accompanying map (Fig. 12) shows that the principal crop combinations in the Corn Belt result from differences in the choice of small grains and hays, and not from differences in the choice of intertilled crops. In the northern part of the Corn Belt, from northeastern Nebraska to northwestern Indiana, the principal small grain is oats, whereas along the southern margin and in the eastern end it is winter (fall) wheat.

Temperature and soil conditions are important factors in determining the choice between these two crops. Crossing these two small-grain divisions of the Corn Belt in the vicinity of Sioux City, Iowa, Omaha, Nebr., and Kansas City, Mo., there is a line largely determined by moisture conditions, to

the west of which the principal hay is alfalfa, and to the east of which it is clover and timothy. Thus, with corn practically excluding other intertilled crops from the Corn Belt, and with soil and climatic conditions markedly influencing the choice of small grain and hay crops, the principal crop combinations in the Corn Belt are (1) corn, spring oats, and clover and timothy; (2) corn, winter wheat, and clover and timothy; (3) corn, spring oats, and alfalfa; and (4) corn, winter wheat, and alfalfa.

Handling the Crop.

Farm practices in handling the mature corn crop vary in different sections of the country. In the northern and northeastern States and in mountain areas cutting and shocking is the usual practice. In other sections it is more usual to gather the ripened grain from the standing stalk. The sections where these different practices are followed on the majority of the farms are shown in Figure 14.



Methods of Harvesting Corn.

FIG. 14.—The shaded portions of the two maps show the sections of the United States where cutting and shocking corn (above) and gathering it from standing stalks (below) are the more common practices. "Husked" is used in the figure, although in the South corn is often only "jerked."

In the Corn Belt the greatest part of the corn is husked from the standing stalks. Other fields are harvested by live stock turned in to feed. A larger proportion of the corn, however, is now being cut, either for silage or for forage (fodder), than formerly was the case. The percentage of the total corn acreage cut for silage in the different sections of the country is shown in Figure 15 and the percentage cut for fodder in Figure 16. The corn harvester (Fig. 17), the

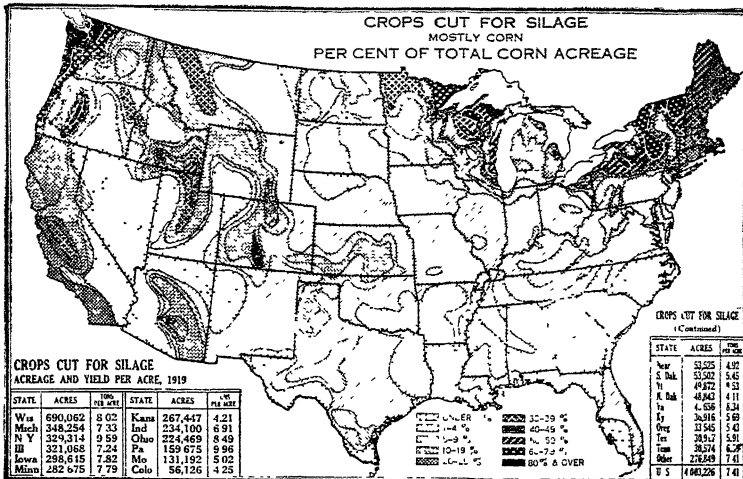


FIG. 15.—A large portion of the corn crop is used for silage north of the limits of heavy grain production and in mountain sections. The acreage harvested for grain is comparatively small in these areas and corn is grown principally for making silage to feed dairy cattle.

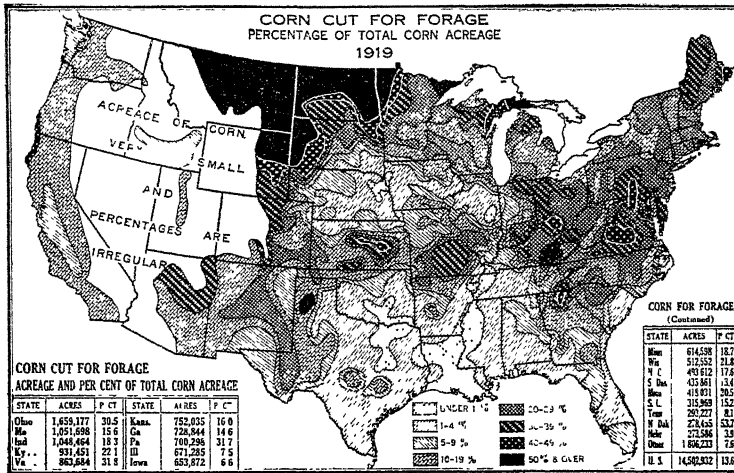
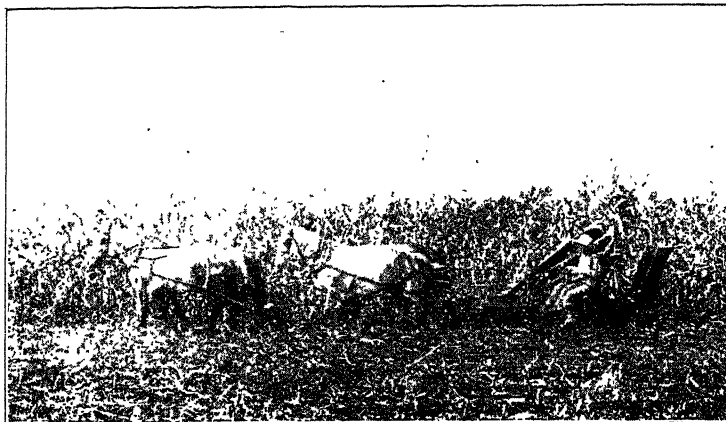
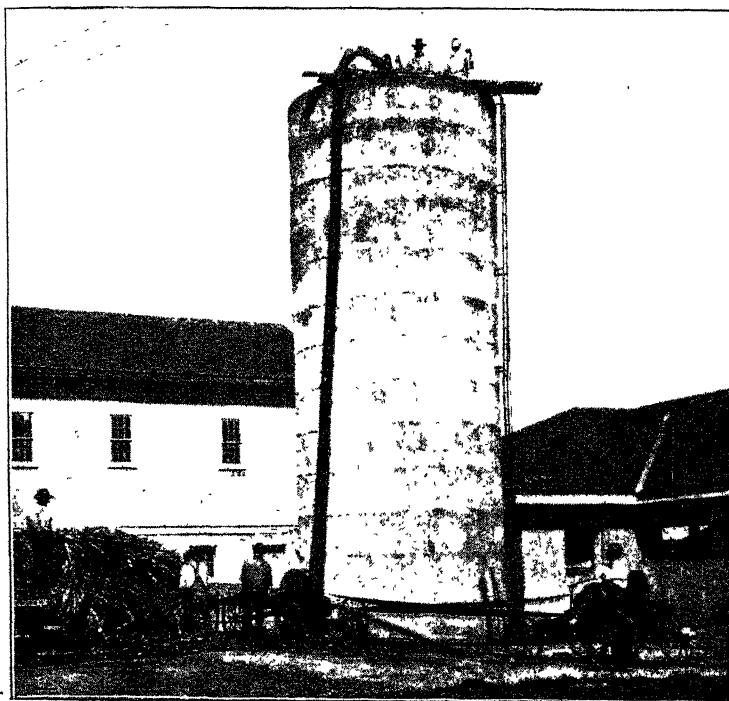


FIG. 16.—The cutting and shocking of corn for forage or fodder is the common practice in the dairy States of the North and in Ohio, northeastern Kentucky, West Virginia, and most of Virginia and Maryland, also in the eastern Ozark region of Missouri. Corn is cut in September, cutting being general between September 10 and 30.



Cutting Corn.

FIG. 17.—A corn harvester at work. More corn is being cut now than formerly both for silage and for fodder.



Filling the Silo.

FIG. 18.—The first silos are reported to have been built in Michigan in 1875. Since then the number has increased rapidly in the dairy regions. Silage is also being used to some extent in feeding beef cattle and other live stock.

shredder, and the silage cutter (Fig. 18) are being more extensively used. This is more expensive than "hogging down," which practice is also becoming more common, but better use is made of the crop when it is cut, especially if made into silage or if the stover is shredded.

The cutting of corn for forage or fodder is in general a comparatively more important practice in mountain sections and other areas on the outskirts of corn production. An important exception is found in the east-central States where corn is cut and shocked in preparation for winter wheat. In these areas general farming is practiced with live stock as an important side line. Fodder takes the place of hay that otherwise would need to be grown.

Environmental Factors.

The amount of corn produced in the United States in any year is determined by two things, (1) the acreage planted, and (2) the acre yield. The acreage planted is determined by the farmers, but the acre yield is determined by environmental factors, the most important of which have to do with the soil, the weather, and with insects and diseases.

Soils.

For highest and most profitable yields corn requires a fertile, well-drained, loamy soil well supplied with humus that can be easily worked with labor-saving machinery. Conditions such as these make the Corn Belt what it is. Corn is produced on many soil types ranging from sand to heavy clay, but the yields and the profits from the crop have a close relation to the quality and conditions of the soil. As soils are farmed from year to year their natural fertility gradually becomes less and manure or other fertilizers must be added in order to maintain crop yields. The use of fertilizers, formerly confined to the eastern and southern States, is increasing in the Corn Belt, as profits from their use become apparent.

Climatic Factors.

The most important climatic factors that determine production and yield of corn are rainfall and length and temperature of the growing season. Corn growing is limited toward the north by the short growing season, which is under 120 days in the average year along the Canadian border

(Fig. 19). Along the Gulf it is 240 days or over. Most of the Corn Belt has an average growing season of 150 to 180 days. Comparatively little corn is grown for grain where the season is less than 140 days. Reduction in the length of the season, especially toward the north, caused by late spring or early fall frosts, or by unfavorable weather at planting time, tends to reduce total production and acre yields and to

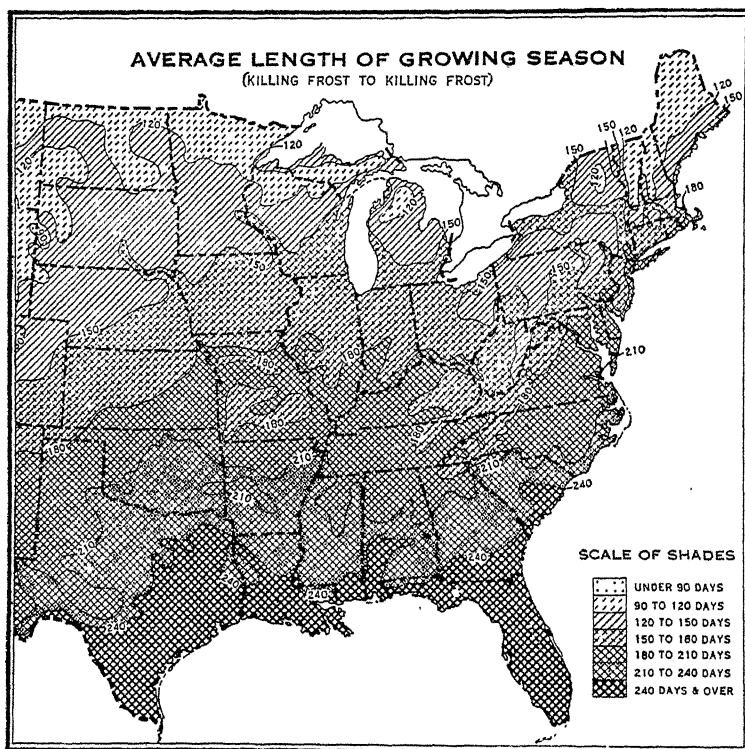


FIG. 19.—The average length of growing season, that is, the average number of days from the last killing frost in the spring to the first killing frost in the fall, increases from north to south and decreases with elevation. Nearly all of the corn crop is grown where the season is over 145 days.

lower the quality of the crop. In some years the amount of merchantable corn is very much reduced, especially toward the northern limit of corn growing and even well into the Corn Belt, by early frosts in the fall. Frost in the early fall is especially destructive to a crop that has been planted late or has been held back by unfavorable growing conditions. This again is of increasing importance from south to north.

Varieties of corn differ widely in the length of growing season required. Some of the southern varieties require as much as 180 days from planting to maturity. Some of those grown in the north will mature in less than 90 days. Efforts are being made continually to develop strains that mature in a shorter season in order that corn growing may be pushed farther northward.



FIG. 20.—Corn planting begins in the usual year before February 1 in extreme southern Texas, and at progressively later dates toward the north. It begins in the heart of the Corn Belt about May 1. Near the northern limits of corn production planting does not begin until about the middle of May.

Corn requires high temperatures both night and day during the growing season. Practically no corn is grown where the mean summer temperature is less than 66° F., or where the average night temperature during the three summer months falls below 55° F. Consequently, the production of corn along the northern border of the United States and at the higher elevations in the West is negligible.

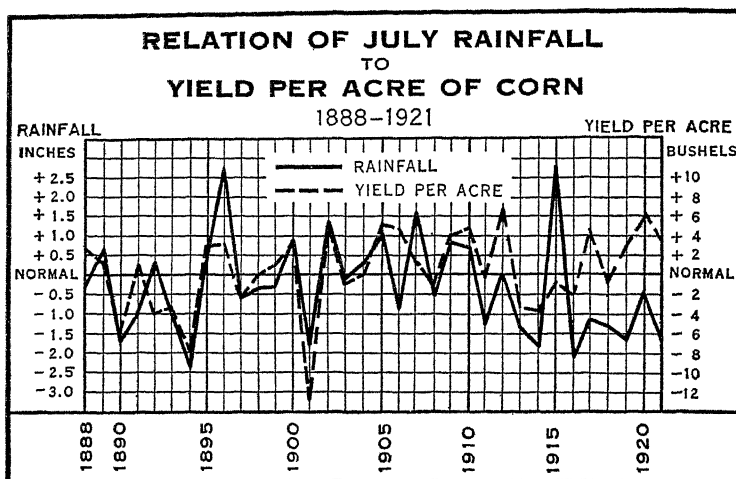


FIG. 21.—The effect of rainfall for the month of July alone on the average yield of corn in Indiana, Illinois, Iowa, and Missouri, of each year from 1888 to 1921, inclusive, is very marked, showing a close relation.

Time of Planting.

Corn planting begins in the usual year (Fig. 20) before February 1 in extreme southern Texas and at progressively later dates toward the north. The northward advance is at an average rate of 13 miles a day, until by May 1 it has begun generally in central Nebraska, north-central Illinois, and central Ohio. During the next 10 days corn planting begins in practically all regions where it is grown northward to the Canadian line. Throughout the Corn Belt planting is general about May 15, and is completed usually by June 1. In New York and northern and eastern Wisconsin it is general the last week in May. In any locality corn planting may continue for two weeks or longer. In the South there is often a second, or late planting, usually in June, after the planting and chopping out of cotton is completed.

Rainfall.

Toward the west corn growing is limited first by low rainfall and secondly by short seasons due to high altitude. Very little corn is grown west of the line of 8-inch mean summer rainfall. The acre yield in any locality is also determined to a large extent both by the amount and by the distribution of rain in the growing season. It has been found by studying yields of corn and the rainfall for

many years that there is a close relation between rainfall in July and yield of corn. This relation for the principal corn States is shown in Figure 21.

Diseases of Corn.

The most destructive and widespread diseases of corn in the United States are common smut and the root, stalk, and ear rots. Other diseases such as head smut, Stewart's disease, and the brown spot disease are sometimes locally important, but the losses caused by them are comparatively negligible.

Common smut is caused by a parasitic fungus (*Ustilago zeae*). It is one of the most destructive and widely distributed of cereal diseases. (See Fig. 22.) The heaviest losses are experienced in the semiarid sections of the Great Plains, where the disease is reported to be increasing in severity. The estimated losses caused by this smut in the United States during the 4-year period, 1917 to 1920, averaged about 80 million bushels annually, or nearly 3 per cent of the average crop.

No practical method of controlling corn smut has been discovered. The most promising outlook along this line lies in the development of productive, smut-resistant strains.

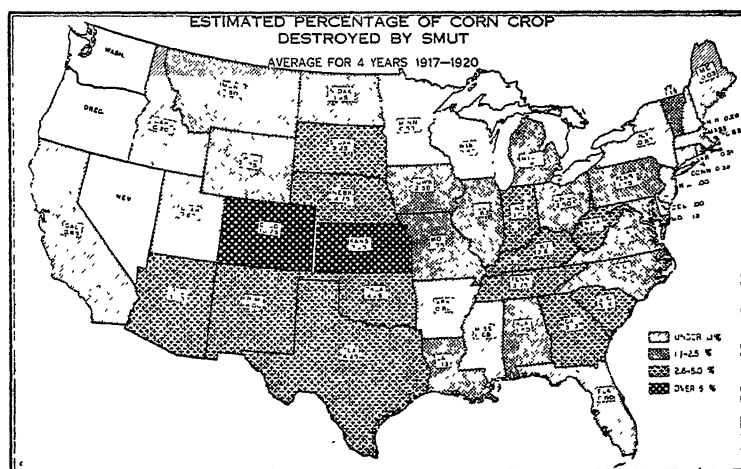


FIG. 22.—Corn smut destroyed an average of about 80 million bushels of corn annually from 1917 to 1920, according to estimates made by the Plant Disease Survey of the U. S. Department of Agriculture, based on reports received from collaborators in the different States. Losses are heaviest in the darker areas.

The principal causes of the root, stalk, and ear rots of corn are a combination of (1) certain parasitic fungi, such as *Fusarium*, *Diplodia*, and the organism that also causes wheat scab; and (2) unfavorable soil conditions resulting in metallic poisoning of the corn plants. The conditions favoring the development of these rots are found throughout the entire Corn Belt, but the damage is most pronounced in Indiana, Illinois, and Iowa, especially in sections where the soil is deficient in calcium and phosphorus. These corn rots result in seedling blight, stunting, leaning and down stalks, poor root systems, barrenness, chlorotic leaves, broken ear shanks, various types of leaf spotting and firing, and generally reduced yields.

The estimated losses from the root, stalk, and ear rots of corn in the United States for the four years 1918 to 1921, inclusive, averaged about 122 million bushels annually, or over 4 per cent of the average crop.

The corn rots can not be controlled by seed treatment. A certain degree of prevention is possible by carefully selecting seed ears in the field from plants showing no symptoms of disease, and testing each ear for germination and disease. These measures, combined with a rotation of crops in which corn does not follow corn or wheat, and building up and maintaining the fertility of the soil by proper practices, especially the addition of lime and phosphorus where necessary, will assist in controlling these diseases.

Insect Enemies of Corn.

The principal insect enemies of corn in the Corn Belt and Mississippi Basin States are the chinch bug, the corn-ear worm, white grubs, the corn-root aphid, and, in the river bottoms, billbugs. Grasshoppers also are occasionally injurious throughout these regions, especially in the States west of the Mississippi River. Doubtless the corn-ear worm is the most constantly injurious of these insects. It has been determined that this pest where abundant causes a loss of at least 7 per cent of the grain on the ears attacked. Chinch bugs are most likely to injure corn during seasons of comparative drought. The States most liable to serious invasion are Ohio, Indiana, Illinois, Missouri, Kansas, Oklahoma, and Texas, although this pest occurs throughout nearly all the corn-producing States of the Union.

In the South Atlantic States, the larger cornstalk borer, the southern corn-root worm, and the corn-ear worm are all seriously injurious, and all of them often may be found invading the same fields. As the corn-ear worm has several generations annually in this region, it is even more injurious here than in the Western States. This insect has caused infinitely greater losses to the corn crop in recent years than the European corn borer, although the wide publicity afforded the latter insect might lead the public to suppose otherwise.

The European corn borer, a native of southern Europe, was discovered in eastern Massachusetts in 1917. It is now

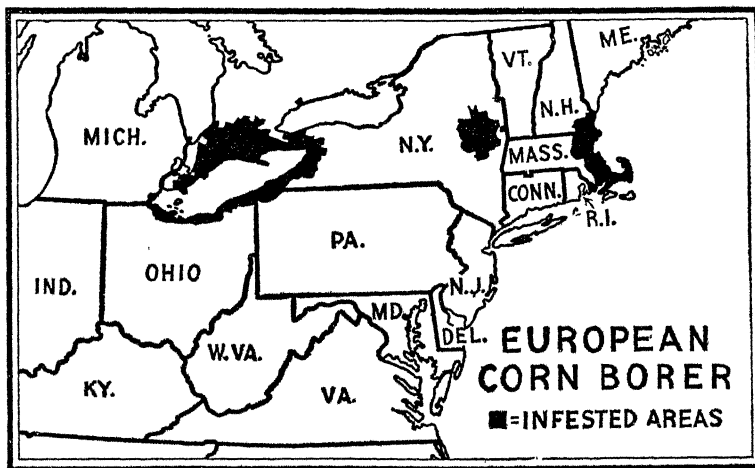


FIG. 23.—The European corn borer is known to be present in the blackened area.

known to be present as far west as the western end of Lake Erie, as shown by the accompanying map (Fig. 23). As yet it has become seriously injurious only in eastern Massachusetts and southern Ontario, Canada. It is feared that it may become a very serious enemy of corn when it reaches the Corn Belt. In Massachusetts this insect has destroyed at least 12 per cent of the corn in the most heavily infested areas. Its work in northern Ohio and southeastern Michigan is yet so trivial as to be imperceptible, and several years may elapse before corn growers in these States begin to feel its presence. Efforts are being made by the Department of Agriculture to prevent the pest from being carried farther westward.

Cost of Production.

To say that the cost of producing corn is 60 cents a bushel, 75 cents, a dollar, or any other sum, and to compare that sum with the prevailing price, which is always fluctuating more or less, is to tell only a small part of a long story, so small a part, in fact, that it is hardly worth the telling. The chief interest centers about the size and proportions of the several items that enter into the final figure. For it is a thorough working knowledge of what the items are, how and why they change year after year, and the probable effect of changes in the items on the financial results of the season's work, which can and does serve the very useful purpose of guiding production. It is one thing to know how to grow corn when only physical conditions need be considered. It is quite another thing to produce corn at a profit when wage rates, prices of materials, rents, and probable prices affect the results in addition to the usual physical conditions. The problem is complex. In the absence of written records it is easy to become confused as to some of the circumstances involved in past operations. The memory does not always serve with sufficient accuracy when sound reasons for decisions are needed.

In the following discussion the final result has been developed by bringing together the details as found. In the several sets of conditions the costs of producing corn add up to more than the effective farm price. They always do on a great number of farms when things are allowed to take their own course. Producers have very little control over the price they will receive, but they can usually forecast roughly what that price is likely to be. Their financial success, therefore, depends largely on their success in making the adjustments of means to the end—in the exercise of good judgment as well as good practice.

Working Standards.

By setting up a definite result to work toward farmers can do a great deal toward adjusting costs to probable prices. This means establishing a working standard and following it closely, comparing progress with one's own standard and the standards of other farmers at frequent intervals.

For want of a better working standard, the average results of a number of farmers may be used. Since many farmers do better than the average, such a standard should be

within the reach of all farmers. It is not a standard in the sense that it is the best possible practice, nor one that should be adhered to indefinitely, as will be admitted when it is recalled that the average farmer gets little more for his own efforts than he pays his hired men. It is standard in the sense that equally good results may reasonably be expected wherever its conditions are met. There are, of course, different standards in the several producing areas. What is good practice in New England would bring poor results in the Corn Belt. And even in the Corn Belt there are marked differences in what is held to be good practice in the differ-

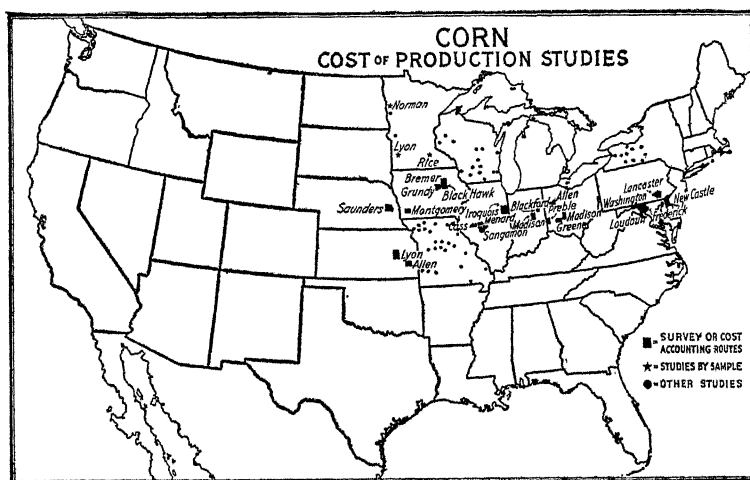


FIG. 24.—The cost of producing the 1917 corn crop was studied by the Office of Farm Management and Farm Economics in the areas indicated on this map.

ent sections. These differences are compensated for to some extent by different prices and different cost rates.

A study of the cost of producing the corn crop of 1917 was made by members of the staff of the Office of Farm Management and Farm Economics from the records of 253 farmers in 12 representative areas in the principal corn-growing regions of the country. (See Fig. 24.) The data so obtained have been used as a tentative working standard and with this as a base, the cost of producing corn in 1921 has been computed. The main differences between the two years are in the price of corn and in the rates prevailing for the several items of cost. Due consideration was given to the

changes in these rates, item by item, and all were diligently compared in the light of the best available current data. The results, therefore, while somewhat lacking in accuracy of detail, present a picture which is essentially true. These results are shown graphically, for each of the 12 areas studied, in Figure 25.

Variations in Costs of Producing Corn.

The cost of producing an acre of corn varies from farm to farm and from State to State. There are even greater differences in the costs in different regions of the United States. These differences are due in part to different practices. For example, the cost of producing corn that is harvested by husking from standing stalks is less in every State for which we have data than the cost in the States in which the corn is customarily cut and husked from the shock. There are other factors, such as larger and leveler fields, the use of larger machinery and larger teams which make differences in cost. The horse labor requirements per acre do not vary as much as the man labor requirements, yet there are some striking differences in the former. In Indiana, for example, the horse labor requirements are very much greater than in Nebraska.

The use cost of land (rent, or interest on land value), averaging \$11.90 per acre, is the largest item in the cost of producing corn in the Middle Western States. In several States it is nearly as large an item as all other items combined. In the Eastern States for which we have data the use cost of land is a very much smaller proportion of the total cost. Labor and other miscellaneous costs are much greater in these States than in the Western States, whereas the use cost of land is less than in the Western States. The excess of miscellaneous costs in the East is to some extent offset by the larger value of the stover used for feeding purposes as compared with the value of stalks for pasture. The values of the stalks in the one case, and the stover in the other, are credited against costs and are shown in Figure 25.

The values of cost factors are used in making the above comparisons because it is impossible to add together the physical units of the factors used in producing the corn. The differences are, therefore, due in part to differences in the costs of units or wages paid for labor. The lower part

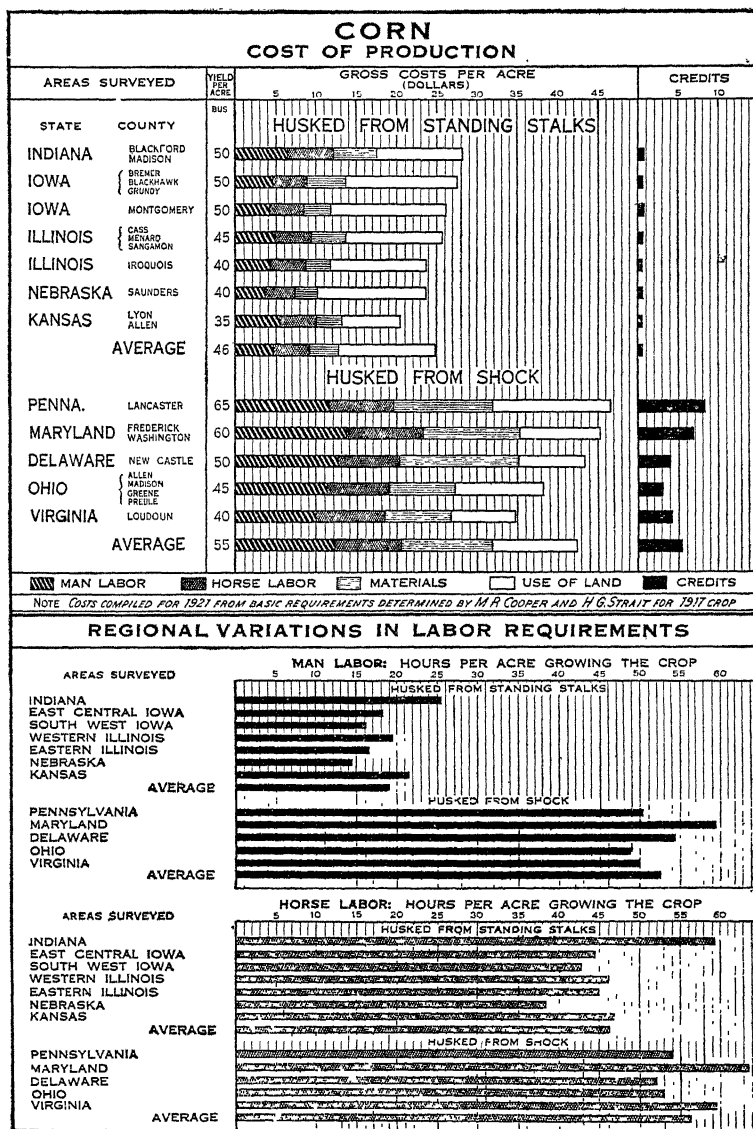


FIG. 25.—Cost of producing corn varies with the method of harvesting and with the different conditions found in different States. It costs more to harvest corn by cutting it and husking from the shock than to husk it from the standing stalks.

The man labor required per acre in growing corn varies. In Indiana it is much greater than in Nebraska, and in Maryland much greater than in Indiana. Comparing the Eastern and the Western States horse labor does not vary as much as man labor.

of Figure 25 shows the variations in man labor and horse labor in hours per acre and demonstrates that the differences in costs are very largely due to differences in labor and units of other factors used in producing the crop.

Trend of Costs.

Cost factors involved in the production of corn may change from year to year. The general movement of costs from 1910 to 1921 is indicated in Figure 27. The wages paid to hired men indicate the movement of labor costs during the period.



Husking Corn from the Stalk.

FIG. 26.—A less expensive method than cutting and later husking from the shock, but the value of the stover from cut corn is greater than that of stalks left in the field.

The prices of articles farmers buy, as reported in the Monthly Crop Reporter (now Weather, Crops, and Markets) each year indicate the movement of other costs. From 1910 to 1914 there were only slight changes in the costs of the factors of production. From 1914 to 1920 costs rose rapidly and to a very high point. Wages rose less rapidly than other costs. It may be noted that the price of corn fluctuates much more than wages or prices of articles farmers buy. From 1915 to 1919 the price of corn rose relatively more rapidly than costs, but costs continued to rise for a year after the price of corn had begun to decline. Costs began to decline a year after

the decline in the price of corn and have not fallen in proportion to the price of corn. On December 1, 1921, wages, price of farm machinery, and other things were still high relative to the price of corn.

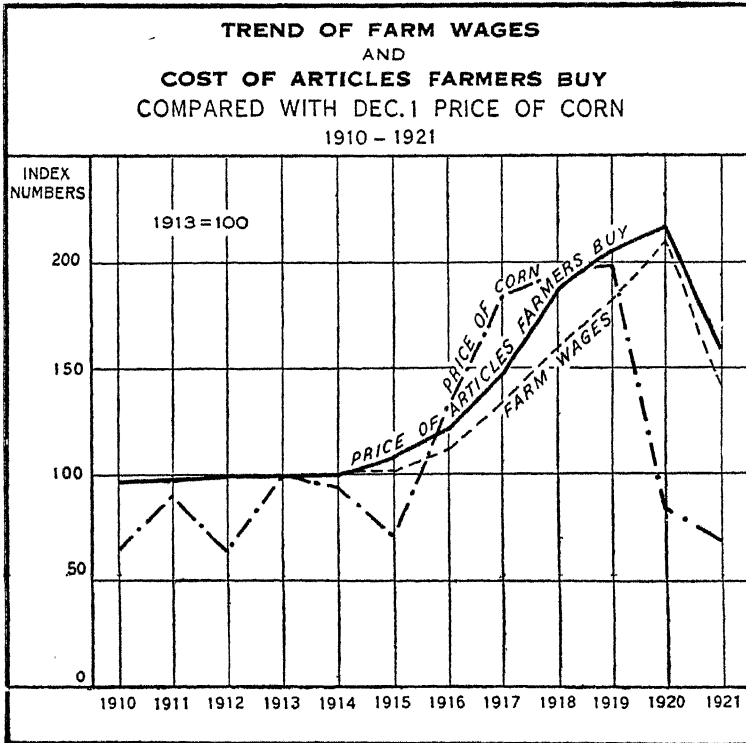


FIG. 27.—The prices and wages are averages for Ohio, Indiana, Illinois, Iowa, Missouri, Nebraska, and Kansas—the Corn Belt States. The price of corn fluctuates more than wages and other costs, and on December 1, 1921, was far below the level of farm wages and prices of things farmers buy.

Estimating Costs.

For the convenience of farmers in estimating costs and returns the details and prices used in computing the costs of corn husked from the standing stalk are given, together with columns in which anyone may work out his own costs by substituting his own details for 1921 for the average figures and note what he may reasonably expect for 1922. As the season progresses, by comparing the rates he is obliged to pay with those he has paid he can estimate beforehand with some confidence the results of the season's operations.

194 *Yearbook of the Department of Agriculture, 1921.*

An example for computing the cost of producing corn (husked from the standing stalk).

Item.	Tentative working standard: Averages 1921—Indiana, Illinois, Iowa, Nebraska, and Kansas.			Your farm, 1921.			Your farm, 1922.		
	Amount.	Price.	Cost	Amount.	Price.	Cost	Amount	Price.	Cost.
Acres of corn per farm.	67 acres.....								
Production per farm.	3,000 bushels.....								
Yield per acre.....	46 bushels.....								
Man labor ¹ (\$40 to \$50 per month and board).	19 hours.....	\$0.25	\$4.75						
Horse labor.....	46.2 hours.....	.10	4.62						
Seed.....	0.14 bushel.....	1.35	.19						
Manure.....	0.85 load.....	1.50	1.28						
Commercial fertilizer.									
Use of equipment...	25.3 hours.....	.05	1.27						
General farm expense (9 per cent of labor and materials).			.98						
Total operating cost per acre.			13.09						
Credit for stalks as feed.			.73						
Net operating cost per acre.			12.36						
Operating cost per bushel (\$12.36 ÷ 46 bushels).			.269						
Use cost of land per acre (rent or interest on \$255 at 4.67 per cent).			11.90						
Cost per acre.....			24.26						
Cost per bushel, including rent (\$24.26 ÷ 46 bushels).			.53						

NOTE.—Cost of hauling to market is 3 to 4 cents per bushel.

¹ In case corn is cut with a binder and husked from the shock the man labor will be increased approximately 2½ hours and the horse labor decreased 2½ hours from the above figures. Three pounds of twine costing 50 cents and the machine charge of approximately 50 cents must also be added, making a total additional cost of approximately \$1.50 per acre, which is largely offset by the increase in the value of stalks as feed.

Markets and Marketing.

The farmer who grows corn is concerned, first, with the successful production of the crop, and, second, with marketing the crop profitably. He is vitally interested in the price received for his corn and other produce, for on this the profits from all his farm operations depend.

In the following pages facts concerning the commercial movement of corn and some of the factors that influence and determine corn prices are discussed. The subjects considered are: (1) Quality and grading of corn, (2) surplus and deficiency of corn in different areas, (3) monthly marketings of corn, (4) moisture content and shrinkage in storage, (5) exports and imports of the United States and Argentina, and (6) freight rates.

Quality and Grading of Corn.

In the commercial channels of distribution, corn is practically always bought and sold by grade. The United States Grain Standards Act requires that in all interstate dealings in which corn is bought or sold by grades, the grades used shall be those established and promulgated by the Secretary of Agriculture. At country points the buyer determines the grade, but at the large terminal markets corn is graded by inspectors licensed by the United States Department of Agriculture, but employed usually either by the State or by the grain exchanges located in such markets. There were about 440 licensed inspectors in 1921.

The Federal grades for corn are based on factors of condition and quality. The best corn is graded No. 1 and corn decreasingly inferior is given numerical grades down to and including No. 6. Sample grade is corn too poor to meet the requirements of the numbered grades.

The receipts of corn at six of the principal markets in the corn-belt States, in the 4-year period, July 1, 1917, to June 30, 1921, grouped according to the grading by the inspectors are shown in Figure 28. The quantity of corn graded on arrival at these six markets during this period averaged 200,856,000 bushels yearly.

The price paid for corn is determined to a large extent by its grade, which is another way of saying that prices

bear a close relation to quality. Prices fluctuate from day to day for any one grade, and different prices are paid for different grades. This is illustrated in Figure 29, which shows the prices for yellow corn at Chicago for the crop year 1920. The differences between the prices of the lower grades and the price of No. 2—the basic or contract grade in the Chicago market—are seen to vary considerably from time to time. The prices of the lower grades were farthest

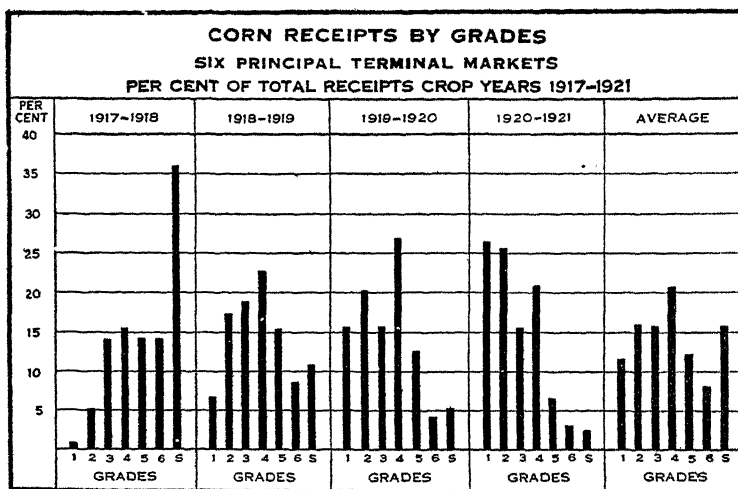


Fig. 28.—Percentage of receipts at six principal terminal markets of the Corn Belt falling in different grades in the four crop-movement years, beginning November 1, 1917, and ending October 31, 1921. The six markets are Chicago, Omaha, Kansas City, St. Louis, Peoria, and Indianapolis.

under No. 2 in January, when No. 6 sold at an average price of 13 cents less than No. 2. The price of No. 1 grade is not shown, but for this period was usually about the same or slightly higher than No. 2. The smallest difference between prices paid for different grades in the period covered was in September, when No. 6 averaged only 3 cents less than No. 2. There are many reasons for these fluctuations and differences in price, based for the most part on considerations of supply and demand.

The quality of the total corn crop is indicated by the Federal grades assigned to that portion arriving at the principal markets. Quality of the total crop is also estimated by the

United States Department of Agriculture from reports received from farmers, grain dealers, and others. The percentages of the corn that was of merchantable quality in 35 crops produced in the years 1886 to 1921 are shown in Figure 30. By merchantable is meant corn of good enough quality to be salable, but not all merchantable corn is sold.

These estimates of the amount of merchantable corn in each crop agree very closely with the conclusions to be drawn from the grading records. Thus, the crop of 1917 was reported to have the lowest percentage of merchantable corn

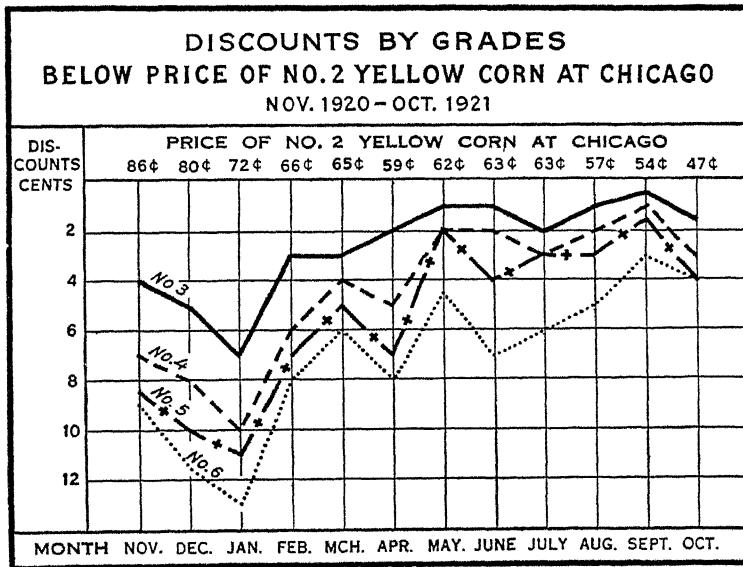


FIG. 29.—Monthly prices paid for No. 2 yellow corn of the 1920 crop arriving at Chicago, and discounts in cents per bushel for lower grades. Prices of No. 1 and No. 2 yellow corn were practically the same during this period, while other grades sold at lower prices.

of any crop in 35 years (Fig. 30). In agreement with this condition only a small amount of the receipts at the six markets graded Nos. 1 and 2, whereas over 35 per cent failed to meet the requirements for the numerical grades and had to be sold on the basis of sample grade (Fig. 28). On the other hand, a high quality is indicated for the crop of 1920 in the estimate of merchantable corn produced and accordingly most of the corn met the requirements for the higher grades, only 2.4 per cent of the receipts falling into sample grade.

The average production of merchantable corn in the United States for the ten years, 1911-1920, has been 2,232,378,700 bushels annually, or four-fifths of the average total crop. In some unfavorable years the percentage merchantable has been very low, as in 1917; in other years it is high, as in 1906, when it was 89.1 per cent. In 17 different years out of 35 the percentage of merchantable corn in the crop has been 85 or over.

Iowa has led in bushels of merchantable corn produced during the ten years 1911-1920, but Nebraska has the dis-

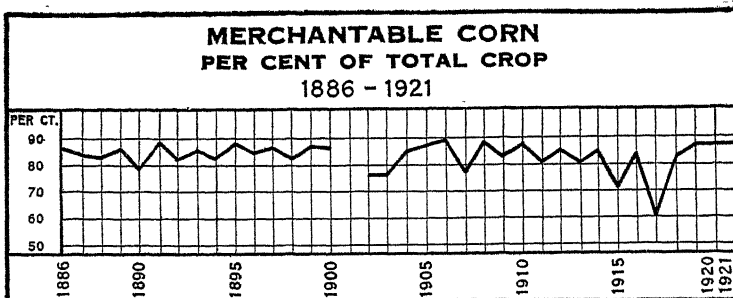


FIG. 30.—Estimates by the U. S. Department of Agriculture of the percentage of merchantable corn (corn good enough to sell) in the total United States crop, produced each year from 1886 to 1921, show that the quality varies from year to year.

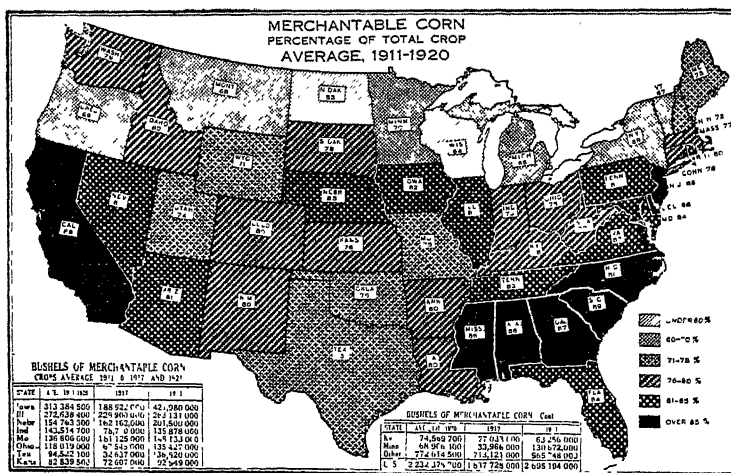


FIG. 31.—Average percentage of merchantable corn produced in all States, 1911-1920; and bushels of merchantable corn in the 1917 (poor quality crop), 1921 (good quality crop), and average, 1911-1920, crop, for the leading corn-producing States. Lighter shading indicates poorer quality.

tion, among the prominent corn States, of leading in the percentage of merchantable corn. Details regarding bushels and percentages of merchantable corn produced are given in Figure 31. In the northern tier of States east of the Rocky Mountains the percentage of merchantable corn is reduced very materially by early frosts in most years; thus the average in North Dakota is only 53 per cent.

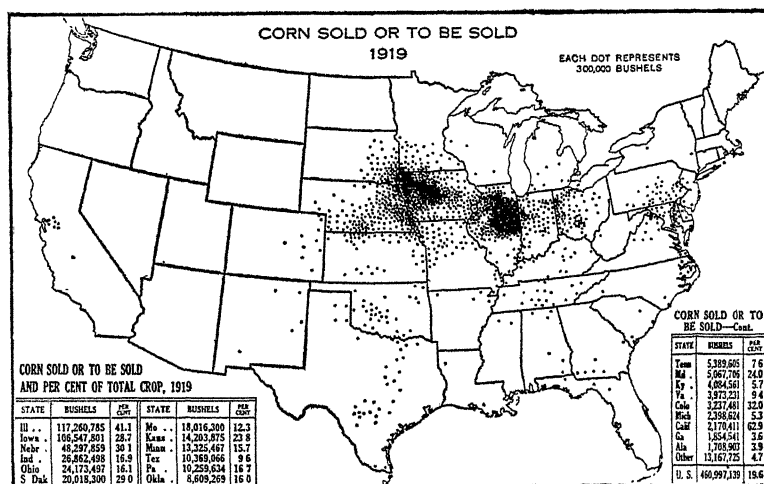


FIG. 32.—Two large and several smaller surplus-producing areas are indicated by these records from the census of 1920. The needs of manufacturers using corn and of deficiency areas are supplied principally from these sources.

Surplus and Deficiency Areas.

By far the largest part of the corn crop is used on the farms where grown. This is shown by the facts that more than 85 per cent of the crop is fed to animals and that the States growing the most corn supply also a large percentage of the finished hogs and cattle.

There is, however, a considerable movement of corn from the farms producing it. This is shown in Figure 32, in which the corn sold or to be sold, as reported by the census of 1920, is represented by dots. Two areas reporting large corn sales are in evidence, one in the northeast quarter of Illinois, within a radius of about 150 miles of Chicago, and the other in northwestern Iowa and the adjoining portions of Nebraska and South Dakota, within a radius of about 150 miles

of Omaha. These are the large surplus corn producing areas. In these limited areas the system of farming is somewhat different from that practiced in other parts of the Corn Belt, a larger part of the corn being sold as grain and not in the form of live stock. In the Illinois area, especially, hogs and beef cattle are not plentiful.

In addition to this large commercial movement of corn from special surplus-producing areas, there is a limited

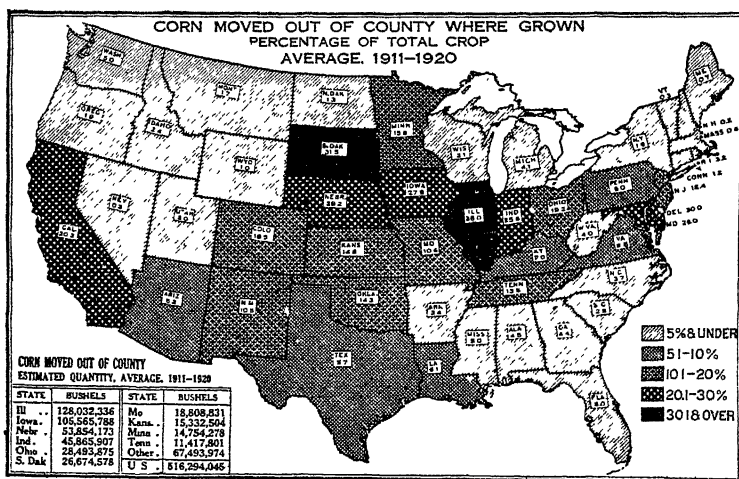


FIG. 33.—Estimates made by the U. S. Department of Agriculture for the 10-year period, 1911 to 1920, show an average movement of corn from the county where grown amounting to 38 per cent in Illinois and to almost nothing in States with small production. A movement out of the county does not necessarily mean a movement out of the State.

movement of corn in every State. This is shown in Figure 33, which illustrates by its different shadings the percentage of the crop moved out of the county where grown.

Although approximately one-fifth of the corn crop is shipped out of the county where grown, as an average for the United States, in most of the States the fraction varies widely from the average. This is practically a commercial movement and is strongest in the States that raise more corn than they consume, being 38 per cent in Illinois, 31.5 per cent in South Dakota, and over 25 per cent in Nebraska, Iowa, and Indiana. But even in the States that raise less corn than they consume, and into which corn is shipped from States that produce a surplus, there is a slight commercial movement of corn from farms.

The total amount of corn that moves out of the county where grown varies greatly in the United States in individual years. It was only about 150 million bushels for the crop of 1901, when the corn crop was a partial failure, but it has usually been between 400 million and 600 million bushels during the last 25 years. The average for the last five years has been over 500 million bushels.

Monthly Marketings of Corn.

Corn begins to move from the farm to some extent as soon as it is harvested. In the Southern States considerable corn

AVERAGE PERCENTAGE OF YEARLY MOVEMENT OF CORN MARKETED EACH MONTH DURING THE 10-YEAR PERIOD FROM JULY 1 1911 TO JUNE 30 1921

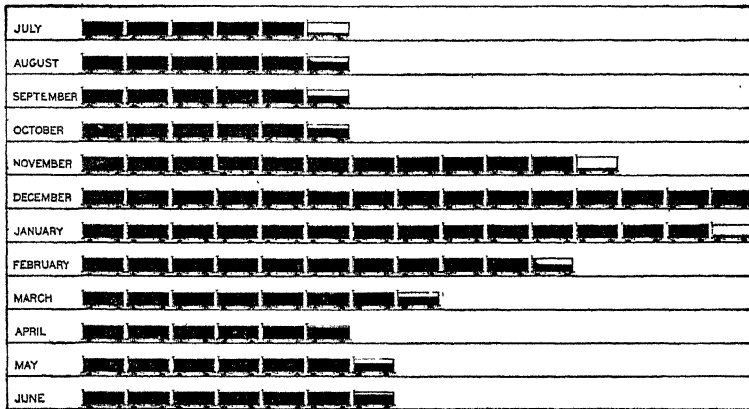


FIG. 34.—Reports received by the U. S. Department of Agriculture show that corn is marketed by farmers principally in the winter months. Each full car represents 1 per cent of the total yearly sales.

is harvested in September and October, but receipts in the market from this source are small. In the Corn Belt harvesting begins in October and about the 1st of November the movement of new corn becomes appreciable. The crop-movement year, therefore, is considered as beginning on November 1. About one-fifth of the total crop sooner or later leaves the farms where it grew. In Figure 34 the sales of corn each month by farmers are shown. Each full car represents 1 per cent of the total sales throughout the year, and the strings of cars opposite each month the sales for that month. The movement from the farm is largest

during the winter, more than one-half of the sales taking place during the four months, November, December, January and February. For the remainder of the year the monthly movement is fairly uniform, although slightly larger in the spring than in summer. For any one year the relative monthly marketings of corn may deviate considerably from the averages given.



Cribbing Corn.

FIG. 35.—Wagon dump, elevator, and corncrib used in the Corn Belt.

Moisture Content and Shrinkage in Storage.

Corn almost always contains some excess moisture at husking time, the amount varying from year to year and differing with locality. The moisture content is lower at husking time in southern grown corn than it is in corn grown farther north. In the crib this excess moisture gradually dries out, resulting in a loss of weight. Drying takes place most rapidly and shrinkage is greatest during the spring months. As this shrinkage progresses a higher price per bushel must be obtained in order to bring the same return.

Moisture tests on receipts from all parts of the country at three large terminal markets indicate that corn arriving in midsummer contains about 8 per cent less moisture than corn arriving in the midwinter preceding (Fig. 36). In experiments conducted in Central Illinois the shrinkage from

harvest to the following August averaged 16.61 per cent for 9 years. In connection with these experiments, comparison of the price per bushel, necessary to compensate for shrinkage, with the 10-year, 1904-1913, average Chicago price of No. 2 corn, showed "that there is no month after November for which the price increases sufficiently to compensate for shrinkage. In fact, the price decreases until January. If, however, January or February is taken as a base, prices

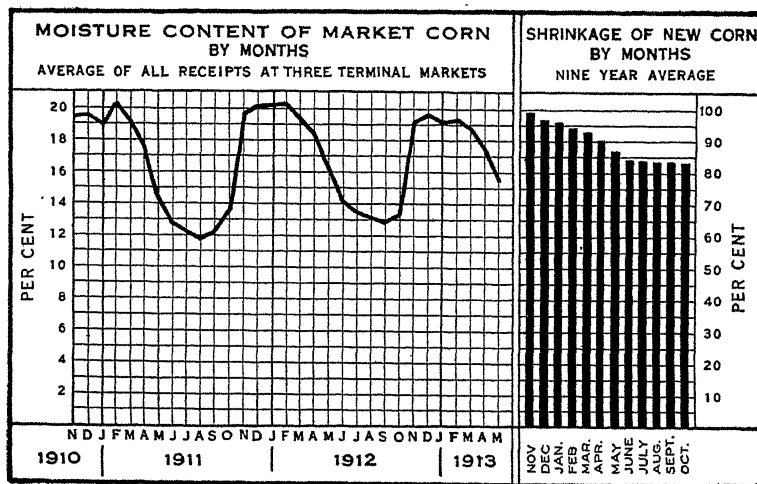


FIG. 36.—Left: The average percentage of moisture in corn, as determined by the U. S. Department of Agriculture, based on receipts at Baltimore, Chicago, and New Orleans, during the period indicated. Right: New corn stored at husking time in an open crib with tight roof and slat sides at the Illinois Agricultural Experiment Station averaged 16.61 per cent maximum shrinkage by August.

being lowest during those months, then the increase in price during the succeeding months, up to but not including October, more than compensates for shrinkage alone.”¹

Exports and Imports.

Although the production of corn in the United States has largely increased in the last 30 years, the increased supply has not resulted in larger exports. In fact the quantity exported was much less in the latter half of this period than it was in the first half, as is shown in Figure 37. The highest

¹ Illinois Agr. Ex. Sta. Bull. No. 183, p. 23.

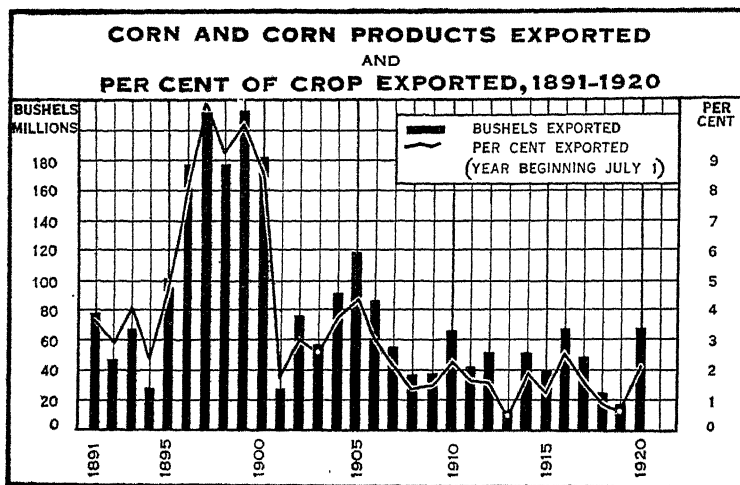


FIG. 37.—Annual exports of corn from the United States by years beginning July 1, 1891, and ending June 30, 1921, in bushels and in percentages of the total crop. Exports were largest from 1896 to 1900.

record for any 12 months was 213,123,000 bushels in the year beginning July 1, 1899, and the smallest was 10,726,000 bushels in 1913. Only once since 1900 have corn exports been above 100 million bushels. This was in 1905 when 119,894,000 bushels were shipped out. The population of the country has been increasing steadily and more animals have been fed from year to year. The demands thus created have taken care of the increased supply. The World War did not stimulate the export movement although slightly larger amounts than usual were sent out in 1916 and 1920.

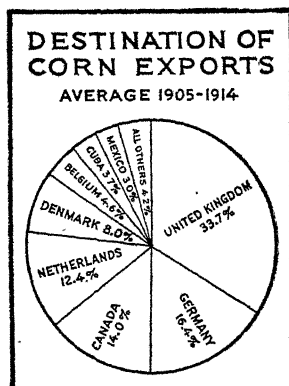


FIG. 38.—Destination of corn exports from the United States in the 10-year pre-war period, 1905-1914.

With an increase in production of corn in this 30-year period from approximately 2 billion bushels to 3 billion bushels annually and with no corresponding increase in quantity exported the percentage of the total crop exported must necessarily decrease. So we find in Figure 37 that although 11.1 per

cent of the total corn crop was exported in 1897 and 10.3 per cent in 1899, this dropped to below 3 per cent in 1907 and has remained below that ever since.

Corn exported from the United States goes mostly to a few countries, as shown in Figure 38, where it is used principally as feed for dairy cattle and other live stock. In the pre-war period, 1905-1914, the United Kingdom received about one-third of our corn exports. About one-sixth went to Germany and decreasingly smaller amounts to Canada, the Netherlands, Denmark, Belgium, Cuba, and Mexico.

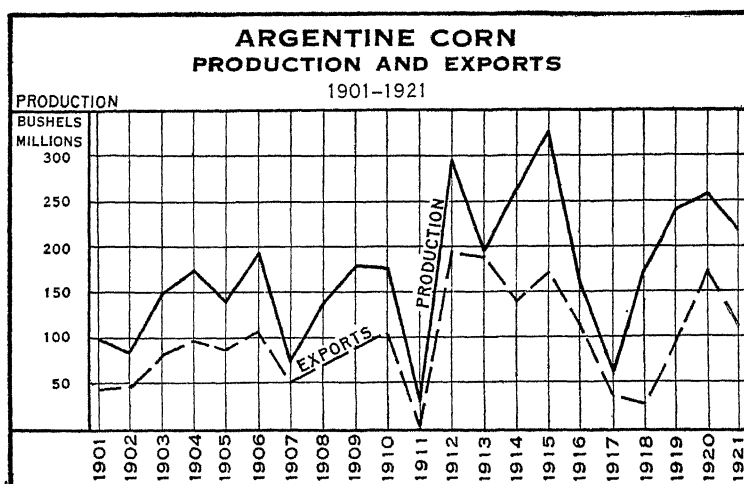


FIG. 39.—Argentina has been increasing in corn production for the last 20 years. Exports and production are closely correlated.

Imports of corn into the United States are almost negligible, rarely exceeding a few million bushels a year. Our largest imports were 15,821,000 bushels in the calendar year 1914. The bulk of this imported corn is from Argentina. It is utilized principally in the industries. A small amount is used as a poultry feed.

Argentine Corn.

Argentina has become important as a corn-growing country during the last 20 years (Fig. 39). The crop of 1901 was 98,842,000 bushels. The 200,000,000-bushel mark was passed in 1912, and the record crop of 325,179,000

bushels was produced in 1915. During the last three years the crop has averaged about 243,000,000 bushels. The record crop of 1915 in Argentina is about equal to the average annual production of merchantable corn in Iowa during the last 10 years.

The increase in production in Argentina has been more rapid than the increase in national consumption, consequently the exports of corn from that country have increased greatly. Exports from Argentina reached a maximum of 190,351,000 bushels in 1912. They were greatly reduced during the war period but increased again in 1920 to 173,642,000 bushels. The importance of Argentina as a corn-producing country from a world standpoint is this large ex-

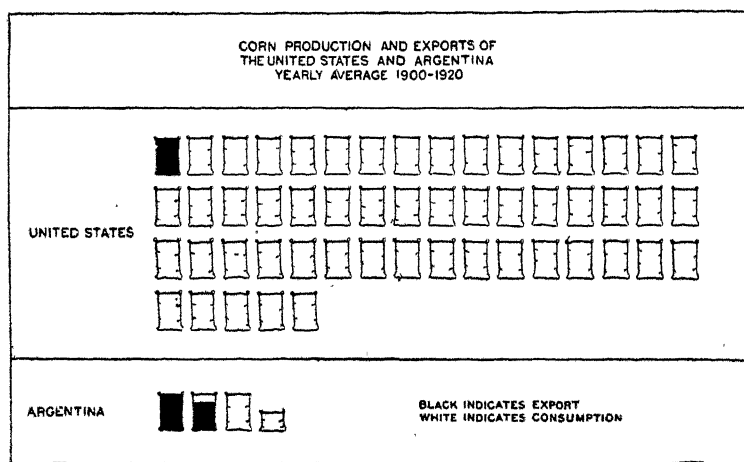


FIG. 40.—Each bag represents 50,000,000 bushels of corn. The United States produces more but exports less than Argentina.

portation. Nearly twice as much corn was exported from Argentina as from the United States in the 20 years, 1900-1920, as shown in Figure 40. Very little of the corn exported from Argentina is imported into the United States.

Most of the corn exported by Argentina goes to Europe, where it comes into competition with corn from the United States. Reports received from special investigators of our Government indicate that Argentine corn is preferred and is purchased instead of American corn, at least in several countries of Europe. The reasons assigned for this pref-

erence in France and Belgium, are: (1) The kernels are smaller, making it better adapted to poultry feeding; (2) it is sweeter and so is preferred as horse feed; and, (3) it contains 3 to 4 per cent less moisture, so will ship and keep in good condition longer. Price seems to have nothing to do with the preference for the South American product for at present Argentine corn sells for 8 to 10 cents a bushel more than American corn. In addition there are probably merchandising features that enter into the situation.

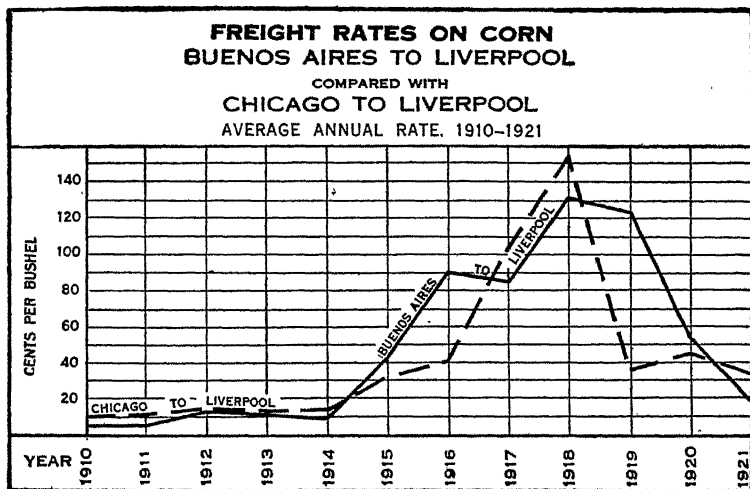


FIG. 41.—Freight rates to Liverpool from Chicago and from Buenos Aires have been about the same for many years. Argentina now has some advantage due to high railroad rates in the United States.

Freight Rates.

The combined rail and ocean rate from Chicago to Liverpool is normally but little greater than the rate from Buenos Aires to Liverpool (Fig. 41). During the war both rates were high, sometimes one and sometimes the other being the higher. Since the war ocean rates have fallen, but our own rail rates are still high, which favors shipments from Argentina to Europe and gives the corn producers of Argentina an advantage over the producers of our Corn Belt that they did not have before the war.

The freight rate per hundred pounds is generally the same for corn as for wheat, but this transportation charge is relatively a much heavier burden on corn, as it is generally less valuable per pound than wheat. Hence the increase in railroad freight rates since the war has affected the price and the movement of corn more than the price and movement of wheat.

The increased freight rates in effect for the last few years have increased the spread between farm and market prices and between prices in surplus and deficiency areas. These increased rates applied both to things that farmers sell and to things that farmers buy have added a heavy burden to agriculture. Coupled with the low prices for farm products in 1921 and the high prices for manufactured products the resulting situation has been critical.

Financing Corn Production.

The production of corn is financed with less use of borrowed capital than is the case with most other staple farm crops. This is true partly because of the diversified system of farming followed in the Corn Belt, which distributes the farmer's income throughout the year more evenly than it is distributed in many other sections. Furthermore, the direct investment in a corn crop consists more of the farmer's own labor and less of purchased material and equipment than is the case with many other crops. Moreover what machinery is used in producing a corn crop is less expensive. The seed is usually produced on the farm and even when purchased the investment is small, since a bushel of corn will plant about 8 acres. For most other important cereals, a bushel or more of seed per acre is needed.

While relatively little capital is borrowed for the actual production of corn, a considerable amount of borrowed capital is used in converting this crop into pork or beef. Some farmers buy 'feeders' for their corn, while others buy corn for their hogs or steers, and still others buy both the animals and the feed. Relatively little merchant credit is used in the Corn Belt, credit usually being obtained directly from the banks.

Prices.

The important factors that determine the general trend of corn prices have been considered in the foregoing pages. The prices received by the corn grower, the prices paid in certain markets, the general movements in corn prices, and

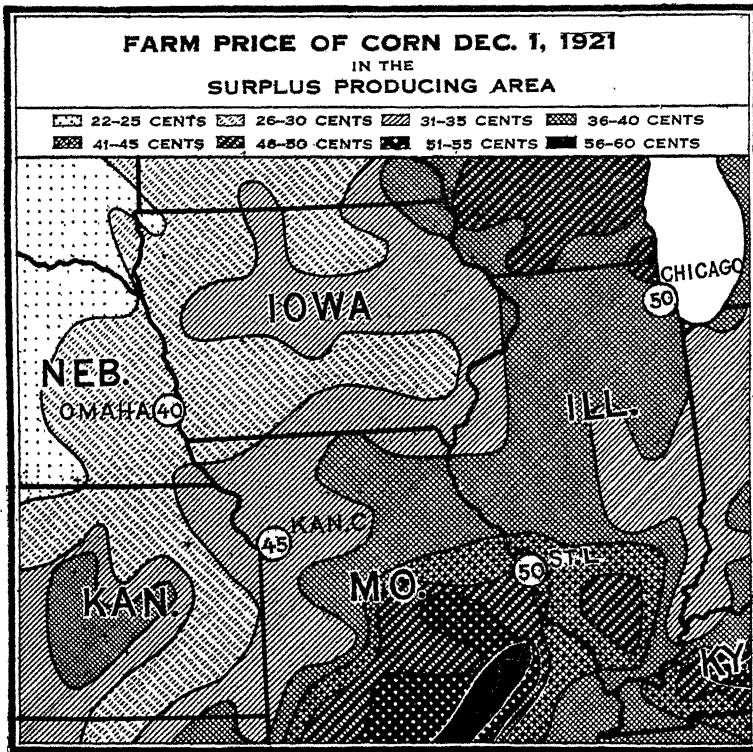
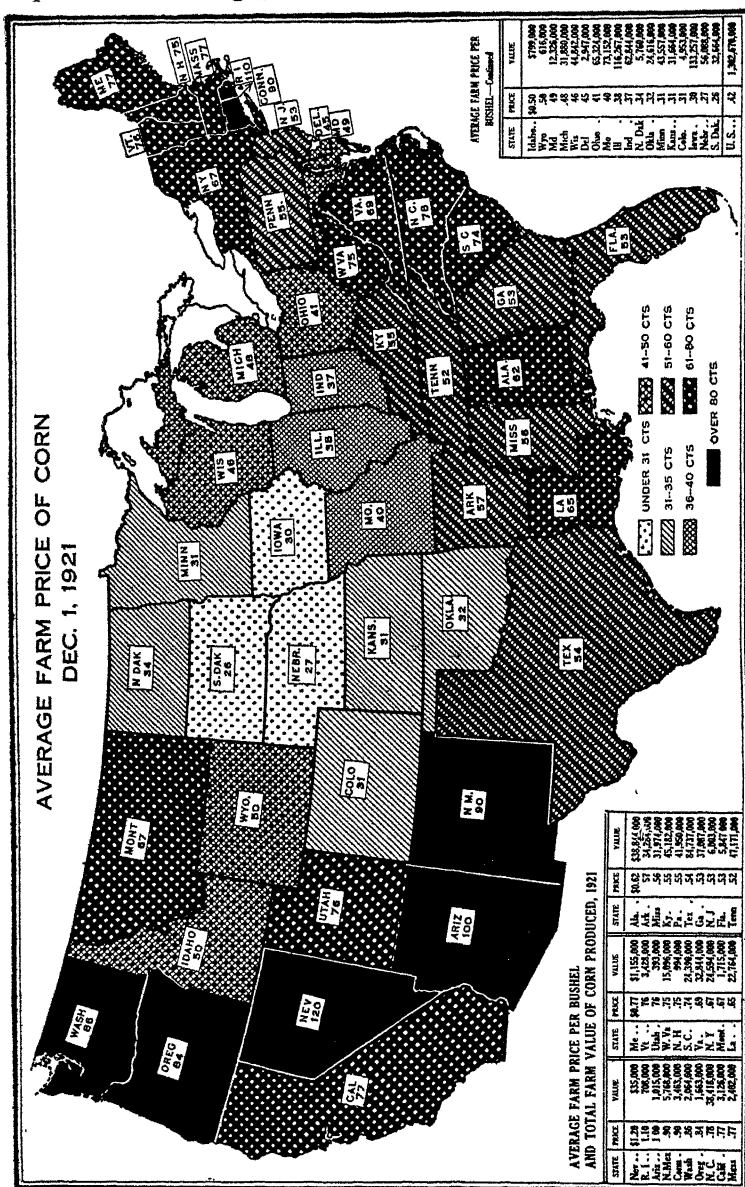


FIG. 42.—Lowest prices were being paid in the sections with the lightest shadings; and progressively higher prices are indicated by progressively darker shadings, based on reports received by the U. S. Department of Agriculture. Market prices are the average of cash sales in the respective markets in cents per bushel for No. 2 yellow corn on the same dates, reported in the Market Reporter.

the purchasing power of a bushel and of an acre of corn for a period of years will now be considered. The acute financial situation of the recent past as it affects the corn grower is thereby explained to some degree.

The farm prices of corn on December 1, 1921, in the principal surplus-producing area of the United States and the price of No. 2 yellow corn in some of the principal markets

on the same date, are shown in Figure 42. The lowest prices were being paid in the western portion of the Corn



ing southern Minnesota, about one-half of Iowa, and eastern portions of Nebraska and Kansas, the farm price of corn was only 26 to 30 cents a bushel. Eastward and westward from this section are irregular belts in which the price was 31 to 35 cents. In most of northern Illinois, northeast Missouri, and in small sections of Kansas and other States the price was 36 to 40 cents. Higher prices, up to 60 cents a bushel, were paid in other portions of the area shown on the map, as in Wisconsin and the southern parts of Missouri and Illinois. But the sections where the highest prices were

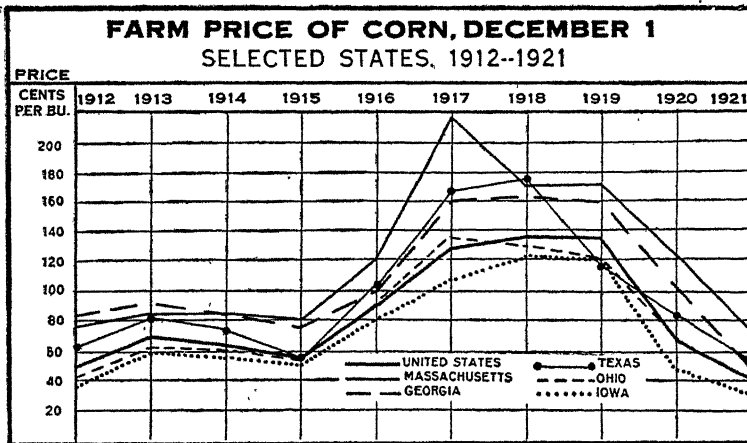


FIG. 44.—The price of corn is usually highest in Massachusetts, of these selected States, and lowest in Iowa. Increased freight rates have widened the spread between prices in producing and consuming States.

paid are really not a part of the surplus producing area. They belong rather in deficiency areas outside of the Corn Belt.

In general any area in which the price of corn is higher than in the market to which it is tributary or from which it must draw its supplies is an area of deficiency and not of surplus. In such areas the price of corn is on the basis of market price plus freight, while in the surplus-producing area it is based on market price minus freight. This principle is illustrated on a wider scale in Figure 43, in which are shown the average farm prices of corn in the different States on December 1, 1921. The price of corn is lowest in

States such as South Dakota, Nebraska, and Iowa, that produce much more corn than they use and are farthest from the places where corn is needed. On the other hand, the price of corn is highest in States such as Rhode Island, Nevada, and Arizona, that use more corn than they produce and are farthest from the sources of supply. In general, as distance from a point somewhere in the western part of the Corn Belt increases the price of corn increases. The exceptions to this rule are the result of local conditions.

That this is not a temporary condition but has extended over many years is shown in Figure 44, in which the price of corn in Iowa—of all the States that are given—is shown to be lowest for practically the entire 10-year period, 1912–1921. It was highest usually in Massachusetts, occasionally in Georgia or Texas.

Movements in Corn Prices.

Three distinct movements in corn prices are apparent when prices over a period of years are analyzed. These are (1) the seasonal fluctuations from month to month, (2) the annual variations, and (3) the trend of prices through periods of years.

Seasonal Fluctuations.

Corn prices are usually lowest at harvest time, when marketings are heaviest. From the low point, generally in December, they rise gradually during the following year until a new crop begins to come on the market, then decline rather sharply to the minimum again. The advance from low to high is generally greater in localities of large surplus than in localities of deficient production. The 5-year (1909–1914) average price and average monthly marketings of corn are shown in Figure 45 for the United States and for Ohio, Iowa, Georgia, and Texas. The marketing cycle is not the same in different parts of the country, but is influenced by the time of harvest, the high point coming earlier in the Southern States than in the Northern States. Therefore, prices do not advance or decline uniformly throughout the country.

It must not be concluded from the advance in prices taking place after harvest time that it will always pay to hold corn

for the higher prices that are likely to be paid later in the year. Several factors of expense and loss must be balanced against the increase in prices, such as cost of handling and storage, interest, and shrinkage due to loss of moisture and ravages by insects, rats, and mice. These factors vary with local conditions, consequently the farmer must determine largely for himself the time at which he should sell his corn.

Annual Variations.

From year to year prices are affected by the size of the crop, the carry over from the previous year,

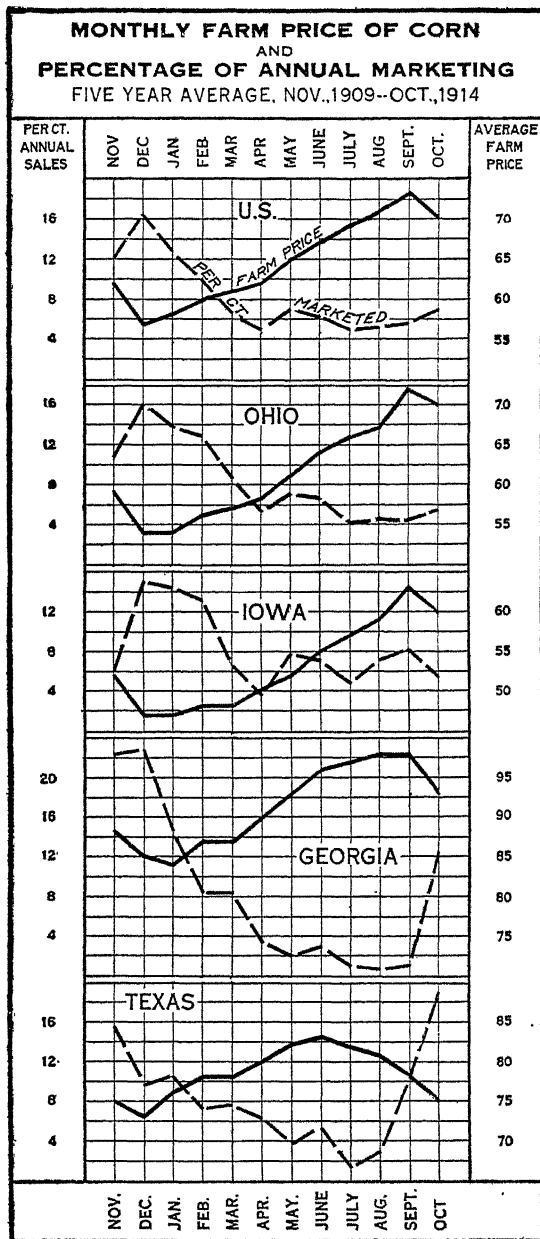


FIG. 45.—Prices (unbroken line) usually are lowest when marketings are heaviest and highest when marketings (broken line) are lightest. Price advances and declines are not uniform in different parts of the country.

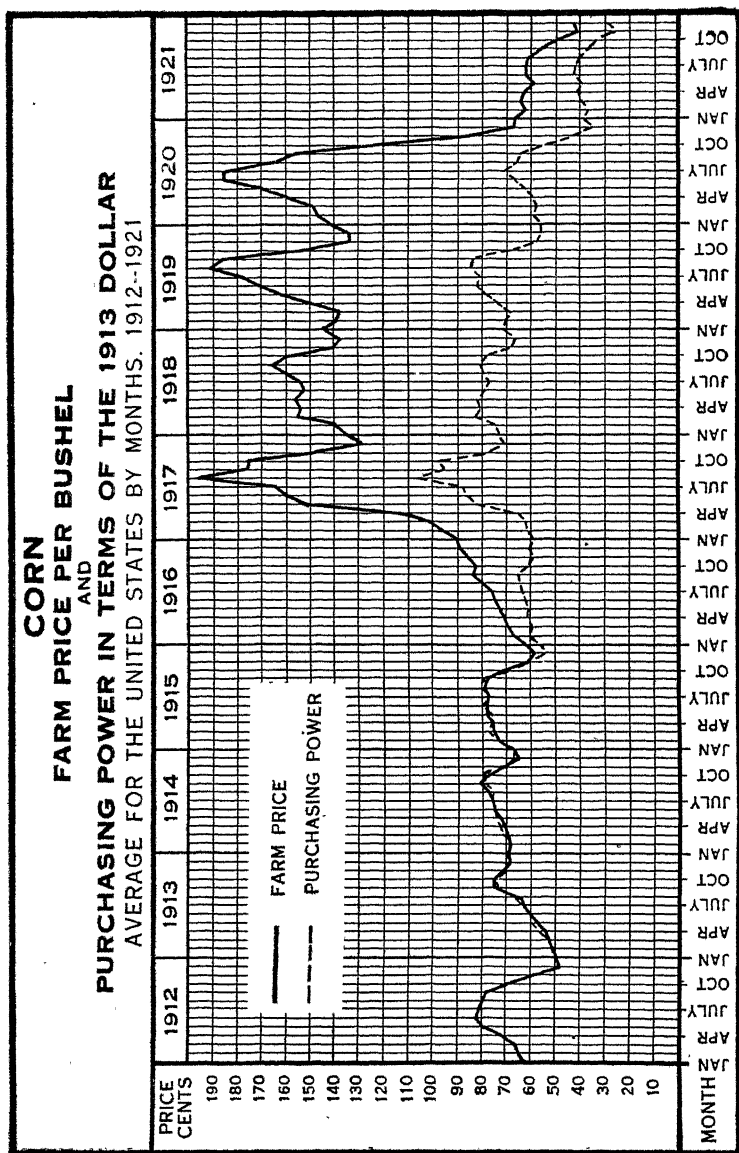


FIG. 46.—Annual seasonal price changes and the effects of war conditions are shown on this chart. The higher prices during the war period did not give the corn producer high purchasing power. Purchasing power is computed by dividing the farm price of corn by the Bureau of Labor index number (average 1913=100) for the wholesale prices of all commodities.

and the demand for corn. In the period 1916-1921, annual prices were also affected by the changes in the general price level, inflation, and deflation. The prices of corn in this period are shown in Figure 46. Seasonal fluctuations as well as annual variations from 1912 to 1921 are also illustrated in this figure.

The Purchasing Power of Corn.

There is no "yardstick" to measure value of corn and other farm products similar to the yardstick used in measuring length. Neither is there anything comparable to the pound. Money is not a true measure of value, for money fluctuates with supply and demand.

A method has been devised, therefore, for determining the purchasing power of farm products. In the case of corn the average price in each month or year is divided by the index numbers for the prices of all commodities, which gives the purchasing power of corn.

If we start with the price of a bushel of corn we obtain the purchasing power of a bushel of corn as the final result. If we start with the average price received for an acre of corn the final result is the purchasing power of an acre of corn. In this way the data on purchasing power of corn, given in Figures 46, 50, and 51, were obtained.

Prices During the War Period.

The European war had no appreciable effect upon the price of corn before the harvest season of 1916. Then, instead of declining as usual with the advent of the new crop, a slight decline occurred during September, after which prices began an upward course that continued until the average farm price passed \$1.90 per bushel in August, 1917. Several causes contributed to this abnormal movement: (1) A small crop and a small carry-over from the previous year, (2) an increase in the number of hogs which increased the demand for corn, (3) a shortage of wheat, which increased the demand for corn meal, (4) a strengthened foreign demand. Ordinarily the amount exported from the United States is negligible, compared with the total crop, and probably very little would have been exported in 1916-17 had it

not been for the war and a serious shortage in the Argentine crop, from which Europe annually obtains feed. These abnormal conditions greatly strengthened the export demand for our corn and resulted in about the usual exports, although our supply was small and prices were very high.

**AMOUNT OF CORN REQUIRED TO PURCHASE A WAGON.
CORN BINDER, GRAIN BINDER AND A GANG PLOW
SPRINGFIELD, ILLINOIS IN 1913, 1920 AND 1921**

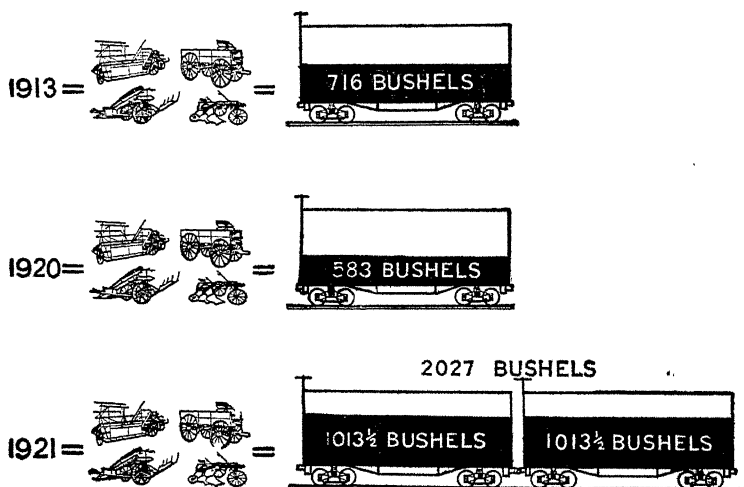


FIG. 47.—Less corn was required to purchase these farm implements in 1920 than in 1913, but in 1921 nearly three times as much corn as in 1913 was required to purchase them.

The price of corn was not fixed directly by the Government during the war, but it was influenced greatly by the policy pursued with respect to hogs. There was a great demand for meat which was indirectly a demand for corn. In the meantime the general price level had risen and this supported the high price of corn until the break came in the summer of 1920. The average farm price of corn began to decline in July, 1920. It fell precipitously until December 1, after which it declined more gradually until December, 1921, when it appears to have reached bottom.

Throughout the war period the purchasing power of corn, shown by the broken line in Figure 46, is a better index of the movement of corn values than price per bushel. In purchasing power the value of corn did not rise very high. Only in 1917 was it appreciably above the prices and purchasing value of 1912. In 1921 the purchasing power was far below that of any other year. This low purchasing power, together with the increased freight rates in effect for the last few years, created the situation illustrated in Figure 47. Prices of most of the things farmers buy have not decreased in proportion to the price of corn, consequently it requires much more corn to purchase needed things than it did previously.

Market Prices.

Corn does not enter into international trade to such an extent as wheat. Chicago is probably the most important corn market in the world. In the same sense that it may be said that the price of wheat is determined in Liverpool, the price of corn may be said to be determined in Chicago. The accompanying graph (Fig. 48) shows that the prices at New York and Liverpool move with the Chicago prices.

The influence of transportation costs on prices may be noted in this graph. High freight rates from Chicago before the Civil War caused a much wider spread between prices at these markets than have existed recently except in the war period.

The Trend of Prices.

There are periods during which the general trend of corn prices is upward or downward. Such periods are shown in Figures 48, 50, and 51. The direction of the trend is due in part to changes in the price level of commodities in general and in part to the possibilities and limitations for expansion of corn growing under profitable conditions. Thus, following the Civil War the general price level of all commodities declined until about 1897, when it turned upward. During these years also there was a rapid expansion of corn growing on the new and fertile soils of the Corn Belt. Conse-

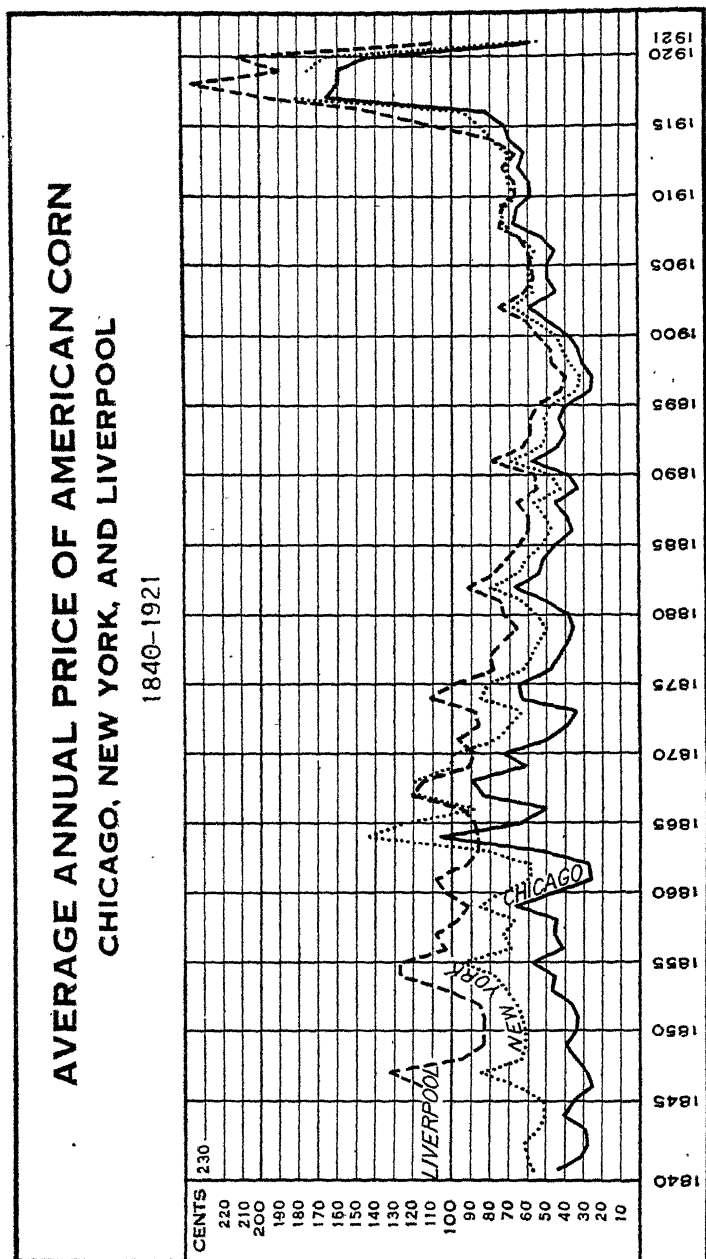


FIG. 48.—The trends of corn prices in leading world markets may be noted above. Prices in Chicago, New York, and Liverpool vary together. The spread between these markets had diminished to small differences before the late war.
Sources: Chicago and New York, 1840-78, Aldrich Report, pt. 2, pp. 7-9; Chicago, 1879-1920, Price Current Yearbook, 1921, Crop Reporter; New York, 1879-1916, Statistical Abstracts of the U. S.; 1917-1920, New York Journal of Commerce; 1921, Crop Reporter; Liverpool, 1846-1878, Aldrich Report, pt. 1, p. 230; 1879-1903, Broomhall's Corn Trade Yearbook, 1904, p. 160; 904-1921, the Corn Trade News.
Grade: No. 2 mixed used where possible; Liverpool, mixed American maize.
Price quotations: U. S., currency; Liverpool, the pound sterling, converted on the basis of par.

quently the trend of corn prices during this period was downward. With a decreasing rate of expansion in corn acreage and production prices began to rise, and the trend of corn prices was upward during the period beginning about 1897 and continuing to 1917.

The price of corn varies with the supply and demand. Supply is, of course, governed by production. Population is an index of demand. The production of corn per capita, therefore, is more significant in determining the general price trend than is the total production (Fig. 51). The population of the United States has been increasing faster than corn production during recent years, and this has been an important factor in raising the price and purchasing power of corn.

Farm value went far above the purchasing power during the war period. In 1920 and 1921 they began to resume normal relations again. A similar condition existed after the Civil War, but about 1877 or 1878 the purchasing power became higher than the value and remained slightly higher until about 1909.

Situation and Outlook.

The history of the United States has been influenced largely by the corn crop. No picture of our national life is complete that does not portray corn as one of the most important factors in our national development and prosperity. Long before the coming of the white man, the Indian de-



Hogging Down Corn.

FIG. 49.—A common practice that saves labor.

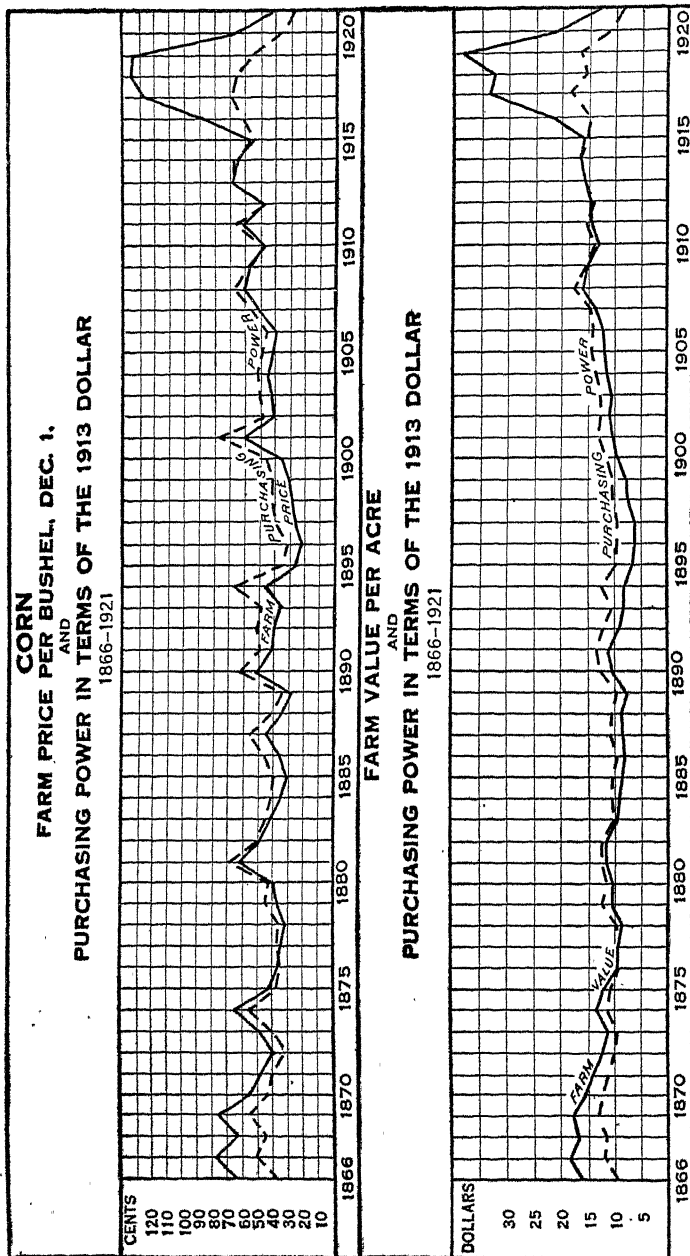


FIG. 50.—The two charts above show trends of farm prices and purchasing power per bushel and of value per acre of corn. It may be noted that the value and purchasing power per acre does not vary as much as the price per bushel. High prices for short crops and low prices for big crops tend to smooth out the value per acre from year to year.

Purchasing power computed by dividing currency price by Bureau of Labor index numbers (base 1913=100), average for all commodities. Average annual index used 1866-1913, December index 1914-1921.

pended upon corn as a principal source of food. The white man in turn adopted the culture of corn in the very beginning and the early Colonies would have failed had this crop not been ready at hand to nourish and sustain them. The western advance of our civilization and the development of our prairies are but instances of the part that corn has played in our advance to a place among the nations of the world.

The history of the development and the importance of the corn industry have been discussed in the preceding pages. The economic factors determining the profitableness of corn production also have been considered. During and since the World War, conditions have changed so widely and so rapidly that the factors involved have been out of adjustment at times with resulting extremes of profit and loss in this as in other industries.

The rapid decline in prices of most commodities during 1920 and 1921 is but a repetition of history. Following the War of 1812, and again after the Civil War, prices that had been excessive first fell abruptly and then recovered somewhat, only to resume a downward course more gradual but longer continued. High prices persisted longer following the World War than after the others, and the drop when it came was more violent. The rise was much the same as during the Civil War and, if history may be taken as a guide, a temporary recovery of prices followed by a gradual decline to stabilization and normalcy may be expected.

Corn prices went through these same cycles also. With high prices during the war, profits were large although increased costs of production prevented their being excessive. With the rapid drop beginning in 1920, profits first decreased and soon had changed to losses. The situation was especially acute because the prices of commodities in general declined less rapidly than those of farm products. In recent months corn prices have improved somewhat. Whether this is but a temporary rise similar to that following the Civil War remains to be seen. Conditions are not parallel. Following the Civil War came the rapid development of our great Corn Belt when large areas of new, productive soil were planted to corn, with a rapid increase both in total production and in

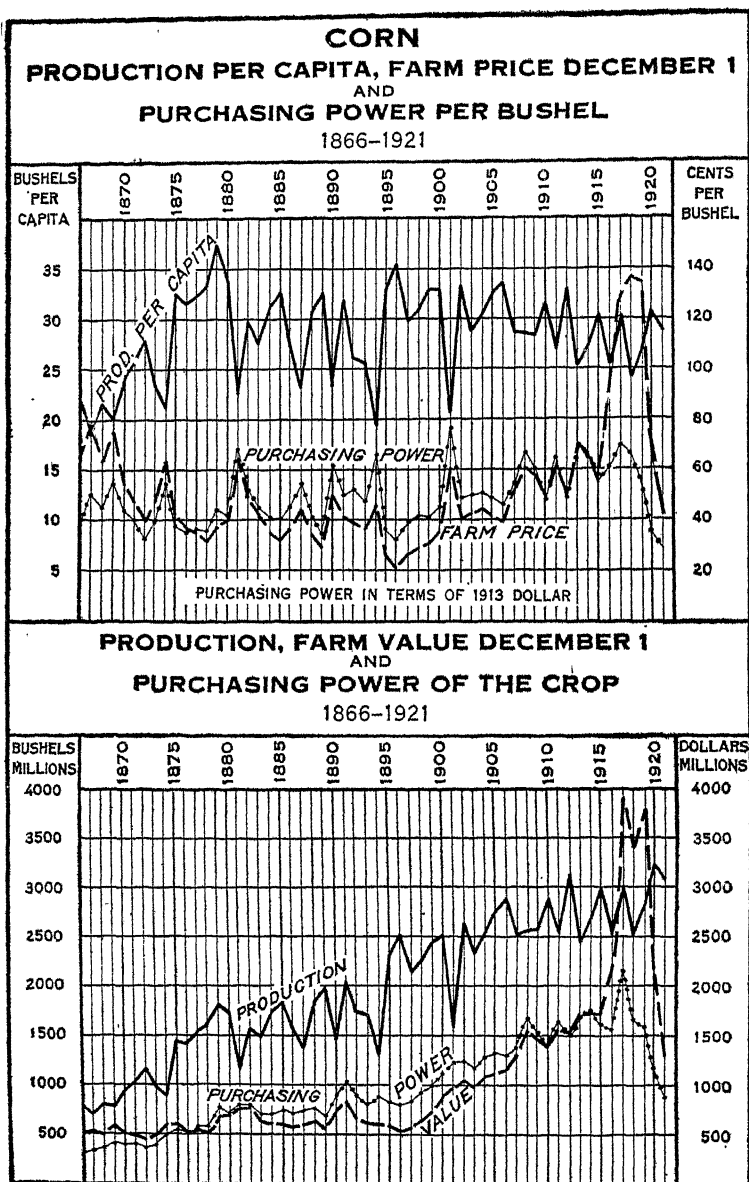


FIG. 51.—It may be noted above that farm price and purchasing power vary inversely to production per capita. Since 1896 the trend of production per capita has declined and the trend of farm price and purchasing power has been upward. War conditions 1917-1919 caused prices to be abnormally high and the general reduction in prices since has caused the prices and purchasing power of corn to be cut below the normal trend.

production per capita (Fig. 51). The possibilities of such expansion do not exist to-day. Total production has been about stationary for the last 10 years, and production per capita has been decreasing. With supply and demand so nearly balanced, the period of adjustment should not take as long.

Moreover, inasmuch as corn prices declined to an unduly low level, it seems probable that their recovery will be relatively greater and that they will not fall as low again. On the other hand, the prices of many other commodities have not yet completed their adjustment, and the purchasing power of corn should increase as this is accomplished. Some reduction in freight rates from the high point in 1921 has already been made. This is particularly gratifying, for high freight rates, coupled with low purchasing power of corn, would lead to violent and confusing changes in agricultural practices throughout the country.

The fundamental factors that will determine the profits in corn production in the future, as they have in the past, are supply and demand. For a number of years these have been so nearly balanced that a slight variation in either had a marked effect on price. The supply is determined by the carry-over from the previous year plus the amount of the current crop. The unknown factor is current production. It already has been shown that production in recent years is dependent largely on yield per acre, which in turn is dependent on the character of the season. Acreage also is of some importance, but a decrease in yield of only 3 bushels per acre over the entire United States would equal approximately the total production of the State of Illinois.

The corn crop is subject so largely to the influence of the environment that nothing can be foretold as to the size of the coming crop. Drought and frost make large differences in yield from year to year. Diseases and insect pests take their toll. With this in mind it does not seem wise to reduce the acreage unduly on the basis of a surplus in one or two years.

There are many farms, particularly in the Corn Belt, where a succession of corn crops from the same land has de-

pleted fertility. Advantage should be taken of periods of surplus production and low prices to rest such fields and to build up their productiveness by growing legumes and other forage crops. These crops, together with the low-priced corn, should be fed to live stock, the manure returned to the land, and the fields thus be prepared for higher acre yields at a time when better prices will mean large profits.

It has been shown that about 60 per cent of the total corn crop goes into the production of meat and milk products. A small percentage increase in this direction accordingly will increase consumption of corn materially. It is here that the corn grower himself can govern the demand for his product to a considerable extent. Hogs especially, offer an opportunity for increasing corn consumption because of their rapid multiplication and the short period required to complete their development.

Holding a part of the surplus corn on farms also is a safe practice. Reserves may well be increased in years of good crops to provide against seasons of partial failure.

We have had two crops of enormous size, each amounting to more than 3 billion bushels. In this lies much of the present difficulty. Happily, therefore, it is not the curse of famine that assails us. These large supplies are being marketed at a rapid rate. The stocks on hand on March 1, 1922, were some 250 million bushels less than they were on the same date a year before. The movement of "feeders"—hogs, cattle, and sheep—to the farms recently has been unusually heavy. Corn is being distributed through the markets in large volume. Corn exports to relieve the famine of Europe have been unusually large, amounting to about 65 million bushels in the first three months of 1922. The economic situation is improving, as evidenced by the fact that the price of corn on Iowa farms, for instance, has advanced from about 30 cents per bushel on December 1, 1921, to 48 cents May 1, 1922.

Economies must be practiced by the corn grower for some time to come, however. Production costs must be kept at a minimum. In planning operations farmers should try to make such readjustments as will enable them to sell corn at a profit even at a comparatively low price level. Careful

records of costs and returns, kept according to the method suggested on pages 193 and 194, will be of assistance in this direction, as thereby the results of the season's operations can be estimated beforehand with some accuracy. Old indebtedness must be reduced as much as possible and new debts must not be incurred except for productive purposes. Finally, a larger part of the family living should be produced on the farm.

If, in addition to these economies, other crops are substituted for corn when and where such a course is dictated by the best agricultural practice; if an increased amount of corn is fed to meat-producing animals; and if a part of the surplus is reserved on the farms against future needs; then, as the purchasing power of corn returns to normal, there is light ahead for the corn grower.

But what of the years to come? Can situations similar to that of the recent past be avoided in the future? Through organized effort providing for storage and necessary credit, marketings of corn can be spread over a longer period and excessive reductions in prices resulting from rapid marketings at harvest time can be avoided. Therefore, as has been pointed out by those who have studied the question carefully, "farm organization of a sound, wise, and far-seeing character is the key to a more prosperous and better paid agricultural industry" and further, "advancement in farm organization, if not preliminary to, at least must go hand in hand with improvement in the distributive machinery of the country."

Moreover, farmers can be kept advised as to the probable future demands for various products. This is needed, for if other nations should adopt a self-sustaining policy with regard to food we must take care not to produce an excess of corn and meat. In case the world requires less pork and beef the corn grower will have to modify his farm practices in harmony with these developments; in short, he must adjust his production to the world demands.

The future demand for corn depends on many things, most important of which is the demand for meat. If increasing supplies of meat, especially pork, are required for our own use and for export, then our corn production must be in-

creased, as we can not grow enough meat to supply an enlarged demand with our present production of corn. Our own population will increase for some years to come. If our present standards of living are maintained, greater corn production will be necessary to supply the meat that will be required by the increased population. The extent to which meat will constitute a part of the diet of this larger population will have an important bearing upon the farm practices of the corn grower.

An effort recently has been made to increase the consumption of corn products, such as corn grits, in Europe. This has met with some success for the present, on account of famine conditions and the comparative cheapness of these products. A continued demand from this source, however, is problematic because it is difficult to educate a people to the use of new foods.

It is the part of wisdom to study conditions as they develop not only in the United States, but throughout the world, and, from the trend of these conditions, as nations recover from the economic chaos of the past few years, to determine the future course. It obviously is impossible to guard against unforeseen conditions such as resulted from the World War. Nevertheless, a total production based on an intelligent survey of world requirements, together with economies resulting from better seed and cultural methods, and improved marketing organized in reference to seasonal supply and demand, will go far to prevent future crises for the corn grower.

Our BEEF SUPPLY

By E. W. SHEETS, *Senior Animal Husbandman, Bureau of Animal Industry*; O. E. BAKER, *Agricultural Economist*; C. E. GIBBONS, *Specialist in Marketing*; O. C. STINE, *Agricultural Economist*; and R. H. WILCOX, *Farm Economist, Bureau of Agricultural Economics*.

Importance of Beef Cattle.

THE importance of beef cattle in the agriculture of this country rests chiefly upon their ability to convert coarse forage, corn, grass, and other products of the land, either unfit or not wanted for human consumption, into a valuable and much-desired food. The value of cattle and calves slaughtered during the last 10 years represents 37 per cent of the total farm value of all meat animals slaughtered and of wool produced (see Fig. 1). Beef cattle are kept on 29 per cent of all farms in the United States (see Fig. 2). Since beef cattle are well adapted to rough land and sparse grazing, beef is the chief human food produced on about three-fourths of the total land area of the United States. This great unimproved area includes brush land, forests and cut-over land, swamps, and, most important of all from the standpoint of the cattle industry, the arid-grazing land of the West. It is obvious that most of this unimproved land will be used chiefly for grazing cattle for many years to come.

But the improved land produces more feed for cattle than the unimproved land, although it constitutes only 26.4 per cent of the land area of the United States. This improved land includes all land regularly tilled, mowed, lying fallow, or occupied by farm buildings, pastures which have been cleared or tilled, gardens, orchards, and vineyards. It is

plain that on this improved land also a great amount of forage unfit for human consumption is produced, such as hay, straw, stover, stalk fields, and aftermath.

However, the demand for beef is such that enough cattle are kept not only to graze the uncultivated areas and consume a large part of the roughage from cultivated crops, but also to eat a considerable proportion of the corn produced. Moreover, the feeding of beef cattle is closely linked with agriculture on improved land, because the most satisfactory

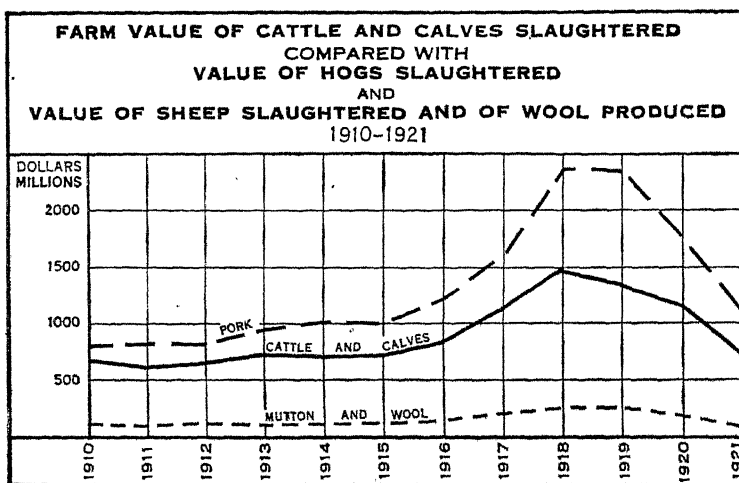


FIG. 1.—The farm value of cattle and calves slaughtered was around 700 million dollars each year from 1910 to 1915, then rose to 1,500 million dollars in 1918, but by 1921 had declined to the prewar average. Although the value of hogs slaughtered normally exceeds slightly that of cattle and calves, the farmer's investment in beef cattle is about twice that in swine. Cattle are slaughtered at an older age than hogs. It will be noted that the annual value of the hogs slaughtered rose more rapidly during the war period than that of cattle and calves slaughtered, and was still slightly higher in 1921 than the prewar average.

system of maintaining soil fertility involves the production of some legume on about one-fourth of the cultivated area each year, and the application of animal manure. The bulk of such legume hay can be used most advantageously by beef cattle. In fact, a great many beef cattle are fattened solely to keep up soil fertility, the value of the manure affording the principal profit from the enterprise.

The production of beef cattle in the United States is important not only in our agriculture but also in the agriculture of the world. Over one-sixth of the world's cattle are

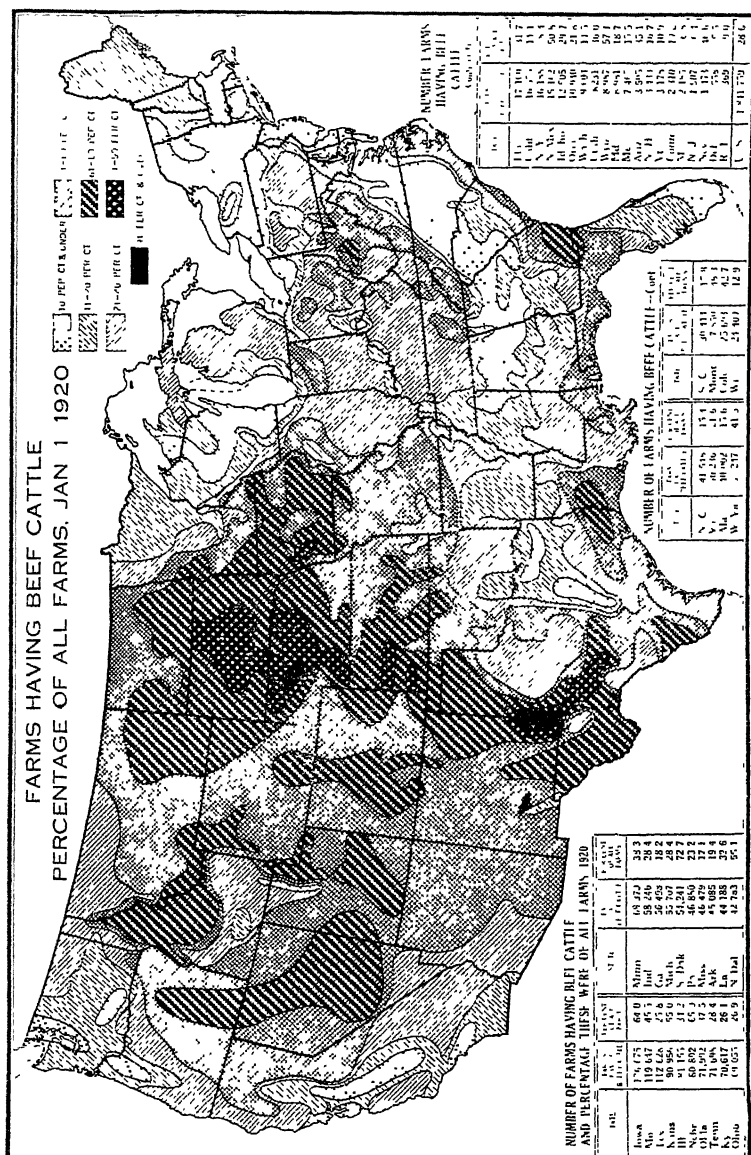


FIG. 2.—This map shows the proportion of the farmers who had beef cattle in 1919. From the Mississippi River to the Pacific Coast regions from 40 to 80 per cent of all farms reported beef cattle. A similar proportion is found along the Gulf and South Atlantic Coast, and in the mountain districts of Virginia, West Virginia, and North Carolina. Less than 20 per cent of the farmers had beef cattle in much of the northern portion of the Cotton Belt, and in the dairy districts of the Northeastern States, of the Lake States, and of the Pacific Coast.

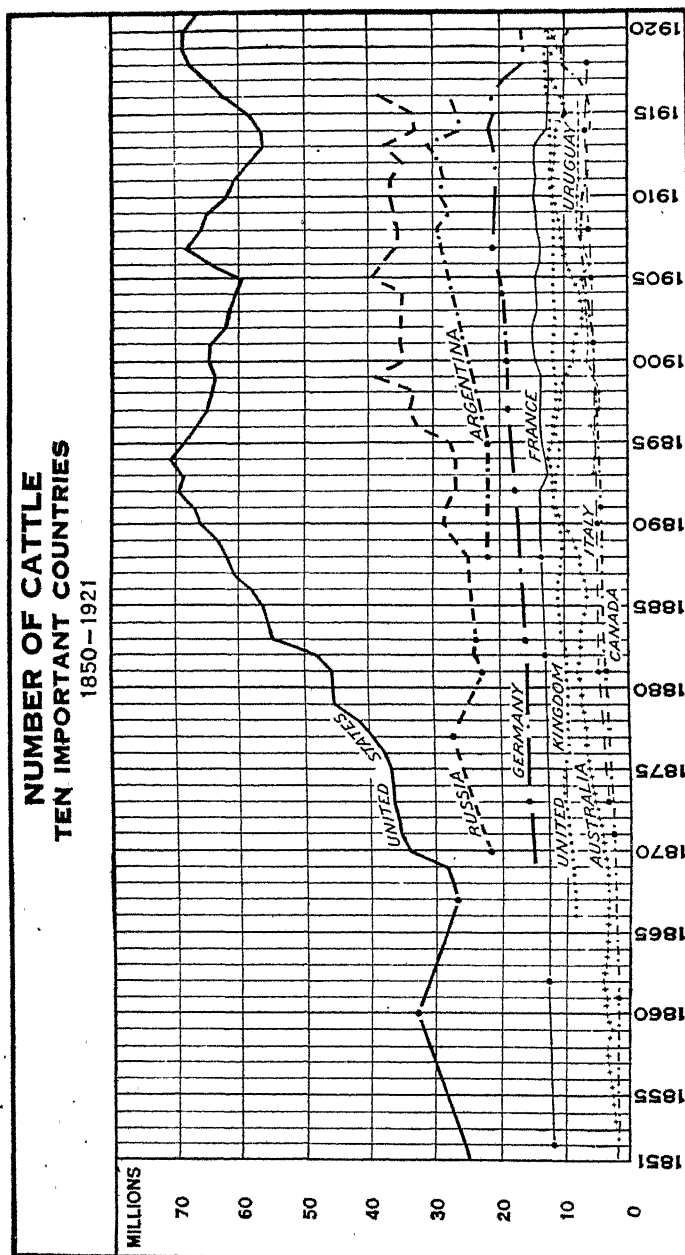


FIG. 3.—The number of cattle in France has remained almost stationary for 70 years; in Germany the number increased until 1907, in Argentina till 1913, in Russia up to 1899, and in the United States there was a rapid rise to 1894, since which year the number has remained more or less constant, except for wide periodic fluctuations. (See Fig. 74.) In the other countries shown the number of cattle slowly increased up to 1918. The increase in the United States from 1867 to 1894 was about equal to the total number of cattle in the United Kingdom, France, Italy, Australia, and Canada to-day.

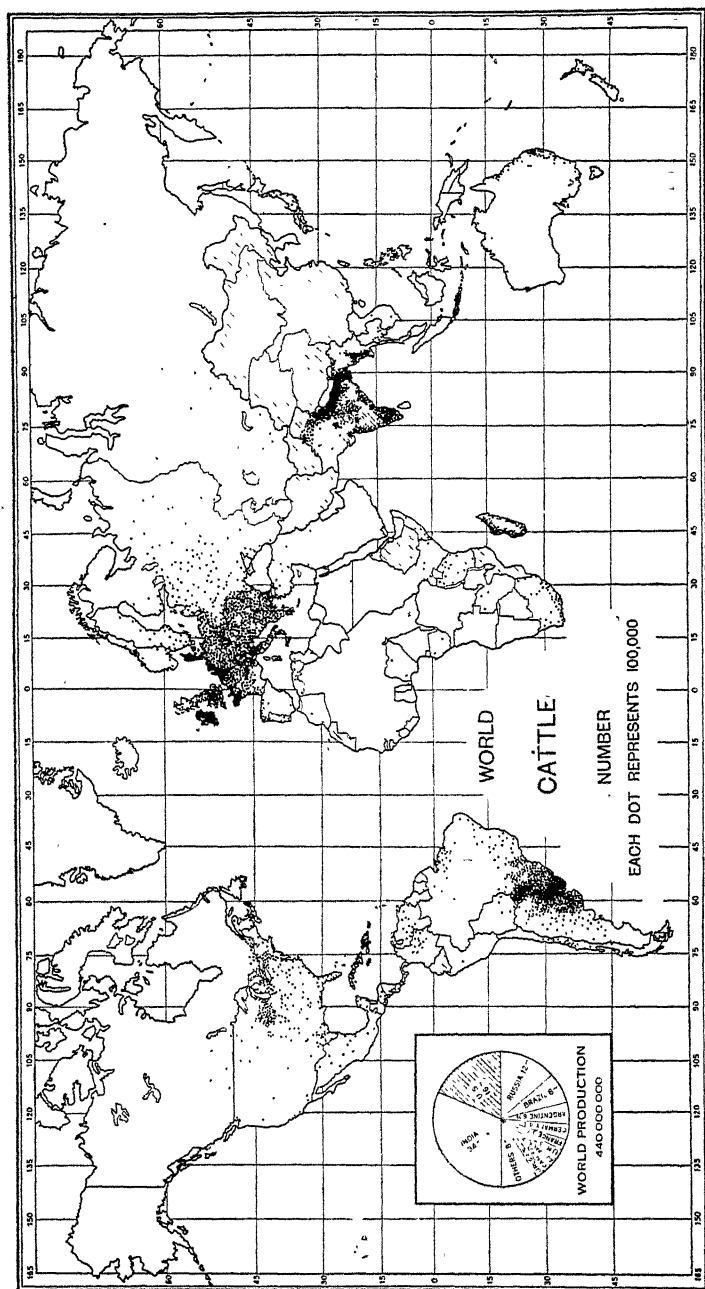


FIG. 4.—The centers of world cattle production are Europe, India, the United States, and southeastern South America, particularly the La Plata River Basin of Argentina, Uruguay, and southern Brazil (see Fig. 3). No figures are available for China and several areas in Africa. The large population of western Europe requires importation of beef in addition to the home supply. Most of these imports come from South America, North America producing now little more than enough for its own needs. India exports practically no beef.

in the United States. The principal surplus-producing countries, however, are now in the Southern Hemisphere. Western Europe produces less than it consumes, and North America, except during the war, has been producing little more than enough to supply its own needs. (See Figs. 3, 4, 69, 74.)

Westward Movement of the Beef-Cattle Industry.

The early Spanish explorers introduced cattle into Florida, the lower Mississippi Valley, and the Southwest during the sixteenth century. The colonists from England and Holland brought cattle to the Atlantic coast during the seventeenth century. Although the Atlantic coast was generally covered with forests, there were in addition open lands along the rivers and coasts which provided considerable grazing. The settlers took their cattle with them as they pushed back from the coast settlements. By the middle of the seventeenth century an important cattle industry had developed in the Connecticut River Valley. From the pastures of New Hampshire and Vermont large droves were annually driven south to be sold at the Brighton Market near Boston or to feeders and dairymen in the three southern New England States.

The settlement of the Shenandoah Valley in Virginia early in the eighteenth century caused a big expansion in cattle production. Settlement pressed westward from the valley and about 1772 settlers from Virginia and Pennsylvania had reached the Monongahela Valley, where herds as large as 400 to 500 head were soon common. From the Shenandoah Valley settlement also spread eastward into the Piedmont of Virginia and the Carolinas, where peavines, other luxuriant forage, and the mild climate made the Piedmont section a great cattle country, famous for its "cowpens" and "cowboys." It was said that a steer could be raised as cheaply as a hen. Following the invention of the cotton gin in 1795, the Piedmont became a cotton country and the cowboys went westward.

As better markets developed in the East and cheap grazing lands were opened in the West and in remote sections of the Eastern States, eastern cattle feeders depended more and more on the drovers for their supply of cattle. Cattle from the grazing regions of the West were driven east across

the Allegheny Mountains in the fall. Shorter drives were made from the grazing regions of northern and central Pennsylvania, and from northern New York and New England. Feeder cattle arriving from the West in the fall were fattened during the winter and spring months and marketed before the western fat cattle began to arrive. Few cattle were fattened on corn until they were 3 or 4 years old. Stockmen who lived near the large cities had a decided advantage in case of a temporary rise in prices, as they could drive their cattle to market in a short time.

The early settlers in the Ohio River Valley found that large crops of corn could be raised very cheaply. As they had no remunerative market for this corn, they fattened cattle, drove them to the eastern markets, and competed successfully with cattle feeders of the East. The first corn-fed cattle from Ohio reached Baltimore in 1805. The cattle, in droves of 150 to 500, were mostly 4 or 5 year old steers, which were fed on corn from four to six months. The driving occurred in the spring and summer and required about six weeks. Ohio, chiefly, and Kentucky were said to have supplied the eastern markets from 1840 to 1850 with nine-tenths of the western corn-fed cattle which they received. Grass-fattened cattle were sent in the fall in limited numbers from Ohio, but no cattle arrived in those markets from the West during the winter.

In 1820 colonists from the East settled in Texas about Austin, and engaged principally in cattle raising. However, the original cattle of Texas, New Mexico, Arizona, and California came from Mexico. In 1833 the Spanish missions estimated their holdings at 424,000 cattle. Driving cattle to the New Orleans market from Texas began in 1842. In 1846, 1,000 head were driven from Texas to Ohio. Thenceforth, driving of Texas cattle northward gradually increased, but did not become a well-established business until after the Civil War, which had left a great surplus in Texas and a scarcity in the North.

Illinois was so far from the Atlantic coast that it did not become an important cattle-raising State until about 1850. However, long before this Iowa, Missouri, and Illinois had furnished thousands of head to the cattle feeders of Ohio. This territory had a further advantage over that farther north and east, because the Mississippi River was open earlier

in the spring for shipping to New Orleans. Settlements were made west of the Missouri about 1850.

The feeders in the Eastern States lost much of their advantage in being close to the markets by the opening of railroads from the Ohio River Valley. Western cattle ar-

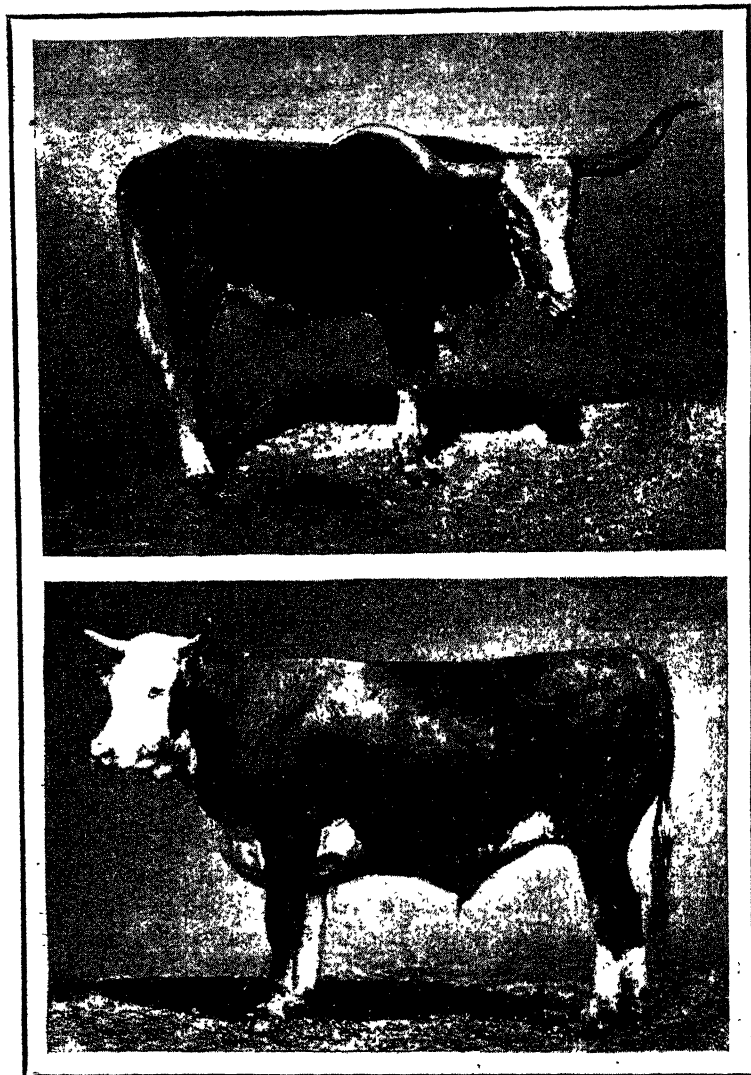


FIG. 5.—The famous Texas Longhorn steers of former years are almost extinct. The improved breeds of beef cattle not only mature much quicker but also dress out considerably more edible meat of better quality. In some western States only purebred bulls of approved type are allowed on the open range. Substantial progress in the use of better sires has also been made in most other States.

rived throughout the year, instead of in the summer and fall. As cattle could be shipped directly from the grazing lands of Illinois to the eastern markets, feeding in Ohio diminished considerably. It was no longer profitable to fatten cattle to a high degree for the long drive across the Appalachian Mountains. By 1860 the railroads extended from the Atlantic to the regions beyond the Mississippi River. Central Illinois and eastern Iowa became a great cattle-feeding district on account of free grazing lands to the south and west, railroad connection with eastern markets, the temperate climate, the adaptability of the rich prairie



FIG. 6.—Branding calves at an annual roundup. Note the high-grade beef cattle which have taken the place of the Texas Longhorns. The use of purebred beef bulls in range herds began about 40 years ago.

grasses for grazing, and the ease with which corn could be produced. Missouri and Texas were now the chief sources of feeder cattle.

From 1800 to 1860 the beef produced in the Southeastern States was insufficient for local demand. In most cases cattle were given little attention. Numbers were greatly reduced during the Civil War. Florida usually had a surplus and exported most of it to the West Indies. Until about 1910 there was practically no improvement made in the cattle of the Cotton Belt on account of the Texas fever ticks and the dominance of the cotton crop (see Figs. 7 and 8).

The development of the range-cattle industry on the Great Plains from 1870 to 1885 is a very important part of the

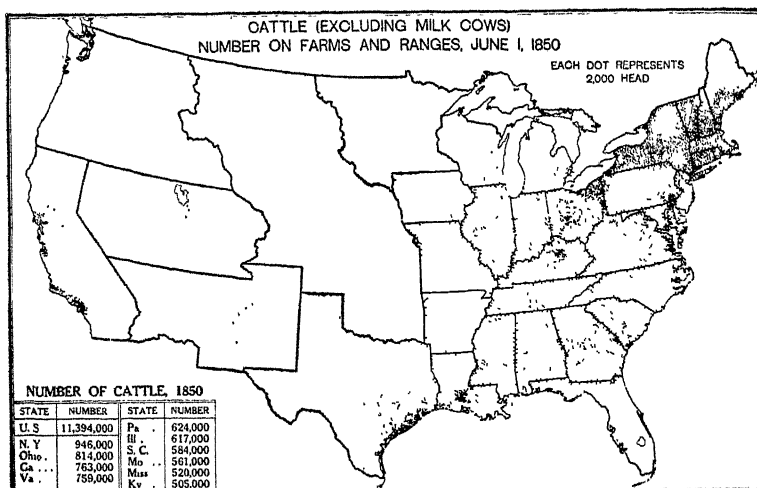


FIG. 7.—The census of 1850 was the second cattle census but was the first separating milk cows from other cattle. In 1850 cattle other than milk cows were distributed fairly evenly over the settled area of the United States. Denser areas may be noted in New England, in western New York, around Philadelphia in Pennsylvania, in northeastern Ohio and the Scioto Valley, in the blue-grass region of Kentucky, in southern Louisiana, along the Gulf coast of Texas, and in southern California. Cattle were driven from western New York, Ohio, and Kentucky to eastern markets for slaughter.

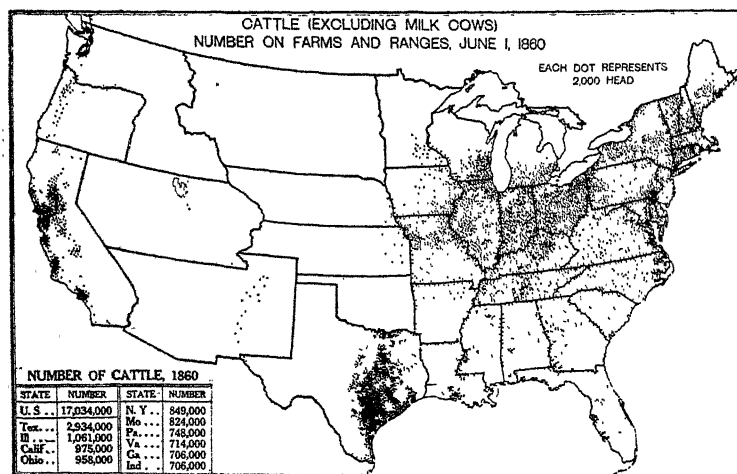


FIG. 8.—By 1860 there had been a notable shift in cattle other than milk cows. There was a great increase in the States north and west of the Ohio River, in Texas, and in California. An increase in number may be noted in the Territory of New Mexico and in Utah. Cattle had not yet reached the Great Plains area. (See Fig. 20.) The driving of cattle from Ohio and Kentucky over the mountains to eastern markets had almost ceased by 1860.

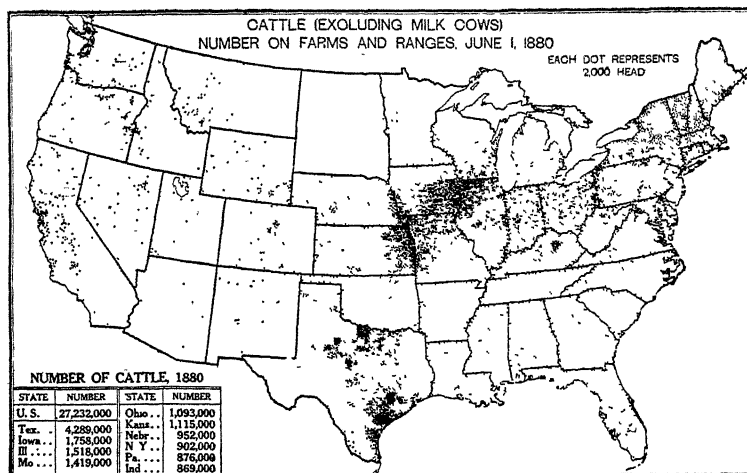


FIG. 9.—By 1880 cattle were grazing over most of the Intermountain areas of the West, and in the Great Plains region, except the Dakotas and eastern Montana. A great reduction in the number of cattle in California may be noted. The number had greatly increased in Iowa, Wisconsin, Illinois, Missouri, Kansas, and Nebraska. The South, excepting Texas, had fewer cattle than before the Civil War.

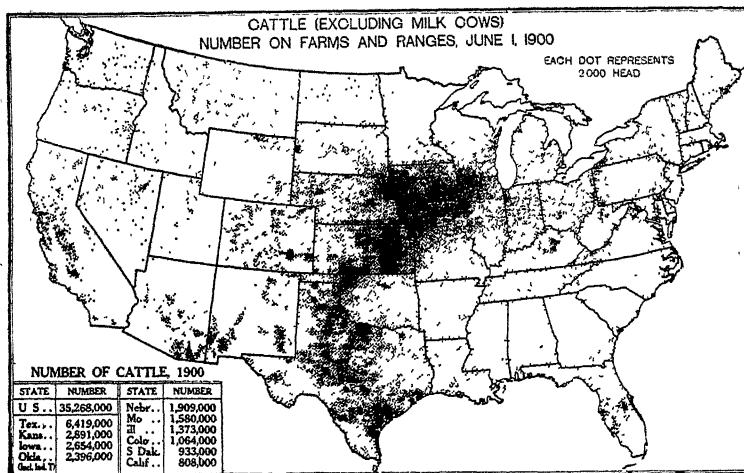


FIG. 10.—From 1880 to 1900 there was a decided falling off in number of cattle, excluding milk cows, in the Northeastern States, due to the growth of the dairy industry, while the number of beef cattle on the Great Plains had increased very greatly. The western part of what is now well known as the Corn Belt was also carrying a large number of cattle. The increase in Iowa and Kansas is especially noteworthy.

history of stock raising in the United States. Texas was the chief source of supply for the entire region, as cows could calve usually at any time of the year and take care of their calves, which was not true in the North.

Utah and Oregon, which had been stocked by cattle driven westward over the Mormon Road and the Oregon Trail in the forties, also became important sources of supply for the ranches of the Great Plains about 1870 (see Figs. 8 and 9).

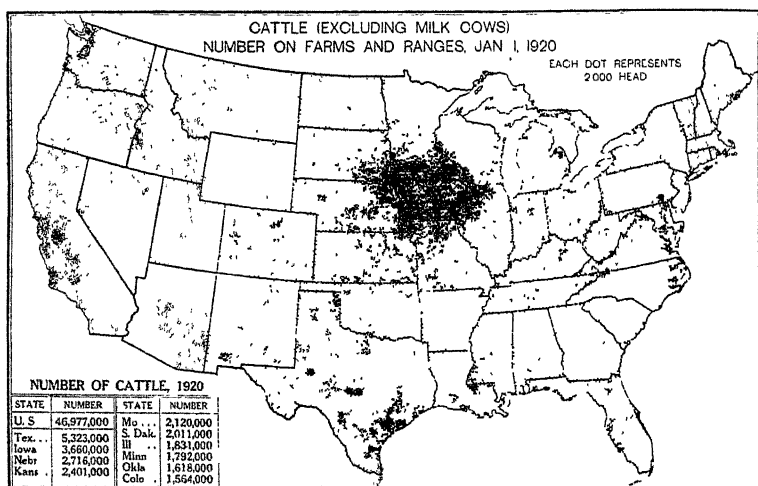


FIG. 11.—The number of cattle has increased since 1900 in Minnesota, where wheat growing has to some extent given way to more live stock and in eastern South Dakota and Nebraska. In the Western Range regions the number of cattle has increased in most sections despite the breaking up of many cattle ranches by homesteaders. The Pacific Coast also shows a considerable increase, as well as the Coastal Plains portion of the Cotton Belt. The decrease is notable in Kansas and central Texas.

The cattle industry on the Pacific coast was greatly stimulated by the tide of immigration following the discovery of gold. Some were driven from Texas and Oregon to supply the demand for meat. Shortly after 1864, when a severe drought in California forced out or destroyed many thousands of cattle, wheat displaced cattle as the chief farm product. The Dakotas and the Mountain and Inter-Mountain States were but sparsely stocked in 1880 (see Fig. 9). By 1900 nearly all of the western territory was occupied and

stocked close to its capacity (see Fig. 10). The number of all cattle in the United States reached the highest point in 1894. Progress since 1894 must be measured in the quality and productivity of the cattle (see Fig. 11).

Purebred Beef Cattle.

The importance of the purebred beef-cattle industry is shown by the fact that, according to the census of 1920, over 3 per cent of the beef cattle were reported to be registered

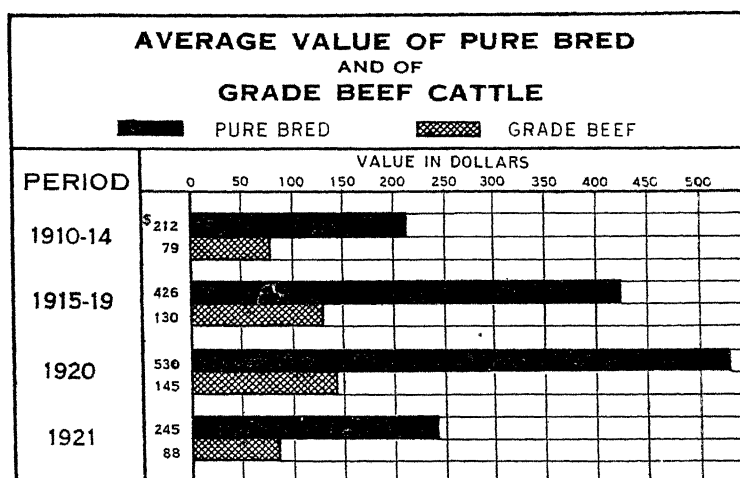


FIG. 12.—The average sale value per head of all purebred beef cattle sold in public auctions is about three times the average value of 1,000-pound good to choice steers in the Chicago market. In 1920 the average sale price of purebred animals was nearly four times that of good to choice steers at Chicago. Even when sold for beef the value of purebred cattle is normally considerably higher than that of grade cattle.

purebreds and over 11 per cent of all farms having beef cattle reported purebreds. Moreover, according to public sales held during the last 20 years, purebreds are about three times as valuable as grades (see Fig. 12). Purebreds constitute approximately 10 per cent of the value of all beef cattle. The main object of the purebred beef-cattle industry is to produce breeding stock which transmit to their offspring early maturity, thick fleshing of meat of high quality, and the ability to use grass, roughage, and grain economically.

Over 50 per cent of the purebred beef cattle are in the Corn Belt (see Fig. 18). Before the eradication of the Texas-fever tick began and before the boll weevil started its ravages, there were practically no purebred herds in the Cotton Belt. On the western range there are many purebred cattle that are not registered, due to failure to register the offspring from registered cattle. Similar herds have resulted from the use of a succession of registered bulls over periods of from 20 to 40 years. Many of these western breeders produce very desirable range bulls and sell only the best for breeding purposes.



Fig. 13.—A herd of purebred Aberdeen-Angus cows and their calves on pasture on a Corn Belt farm.

Table 1 shows what a great market purebred breeders have for their surplus stock. There are 68,454 farms in the United States reported as having purebred beef females (see Fig. 17). Over a million farms report grade beef cows. As 440,210 farms report beef bulls 1 year old and over and only 187,284 report purebred beef bulls of all ages, there are nearly a quarter of a million farms which might be keeping purebred beef bulls instead of the grades and scrubs which they have. As a matter of fact, breeders have not enough purebred bulls of breeding age to put one on each farm where a beef bull is kept. While there is 1 beef bull over 1 year old for every 17 beef cows, there is only 1 purebred beef bull of any age for 32 beef cows. With such a shortage of purebred bulls they should be well cared for and distributed to the very best advantage.

TABLE 1.—Relation of purebred beef cattle to all beef cattle.

[Based on census of Jan. 1, 1920.]

State.	Farms reporting purebred beef cattle.	Per cent of beef cattle farms which report purebreds.	Farms reporting beef cows 2 years old and over.	Grade cows 2 years old and over per grade bull 1 year old and over.	Per cent of farms with beef cows reporting beef bulls.	Per cent of farms with beef bulls reporting purebred beef bulls.
United States.....	Number. 206,387	Per cent. 11.20	Number. 1,041,052	Number. 17	Per cent. 42.29	Per cent. 42.52
Alabama.....	1,161	2.90	20,115	14	28.89	18.71
Arizona.....	299	7.67	2,798	19	59.11	14.99
Arkansas.....	1,815	4.02	24,691	19	19.47	31.27
California.....	1,401	8.46	11,787	21	52.13	22.48
Colorado.....	4,213	16.46	19,569	20	52.65	39.78
Connecticut.....	123	5.32	678	9	38.35	39.23
Delaware.....	4	.72	259	11	20.85	7.41
Florida.....	198	1.16	13,441	31	22.51	5.52
Georgia.....	949	16.80	31,880	16	25.74	9.99
Idaho.....	3,249	25.98	8,370	21	47.44	79.55
Illinois.....	14,501	17.87	49,416	12	51.03	49.63
Indiana.....	6,611	11.35	32,743	12	38.26	42.96
Iowa.....	29,856	21.85	89,351	13	62.95	48.85
Kansas.....	14,261	15.68	61,128	15	55.53	38.78
Kentucky.....	2,356	3.34	24,873	11	24.55	31.48
Louisiana.....	563	12.74	34,044	27	15.46	9.71
Maine.....	554	7.42	2,082	6	49.90	43.00
Maryland.....	226	2.52	3,035	5	55.26	12.22
Massachusetts.....	149	6.82	1,039	11	31.28	36.00
Michigan.....	4,461	8.01	12,325	10	33.73	88.70
Minnesota.....	14,688	21.48	26,701	10	80.94	64.58
Mississippi.....	1,704	3.67	28,504	20	22.89	24.81
Missouri.....	15,145	12.66	83,432	16	32.94	46.67
Montana.....	4,061	14.58	20,917	23	42.42	44.29
Nebraska.....	14,441	17.85	56,598	17	62.63	38.24
Nevada.....	239	16.23	1,259	22	66.72	32.62
New Hampshire.....	350	10.19	834	6	57.19	59.96
New Jersey.....	19	1.00	910	7	35.16	3.11
New Mexico.....	1,298	8.56	13,890	21	45.03	20.11
New York.....	403	2.49	5,658	16	17.27	33.16
North Carolina.....	809	1.95	21,637	13	16.09	18.57
North Dakota.....	8,241	19.26	21,223	13	64.10	57.40
Ohio.....	6,068	8.79	31,000	10	39.16	39.02
Oklahoma.....	8,498	11.80	51,592	19	33.88	43.49
Oregon.....	2,008	18.35	7,839	21	51.65	49.32
Pennsylvania.....	1,518	3.24	11,296	10	24.04	44.70
Rhode Island.....	7	1.90	164	11	35.93	84.75
South Carolina.....	368	1.21	14,124	12	21.01	9.50
South Dakota.....	13,934	25.69	35,954	18	69.86	53.38
Tennessee.....	3,210	4.48	26,906	10	27.86	35.91
Texas.....	6,006	5.33	75,918	22	35.69	20.62
Utah.....	2,645	28.65	7,430	23	47.48	73.58
Vermont.....	223	7.02	610	6	69.34	47.75
Virginia.....	2,102	5.22	13,725	11	34.99	38.32
Washington.....	1,359	14.15	5,827	20	39.64	55.93
West Virginia.....	2,553	7.04	18,458	14	23.49	49.50
Wisconsin.....	5,779	23.68	7,528	12	67.97	106.64
Wyoming.....	1,691	18.82	7,538	21	52.73	41.61
District of Columbia.....			6			

¹ The percentage exceeds 100 because the number of farms reporting purebred bulls of all ages is greater than the number of farms reporting beef bulls over 1 year old.

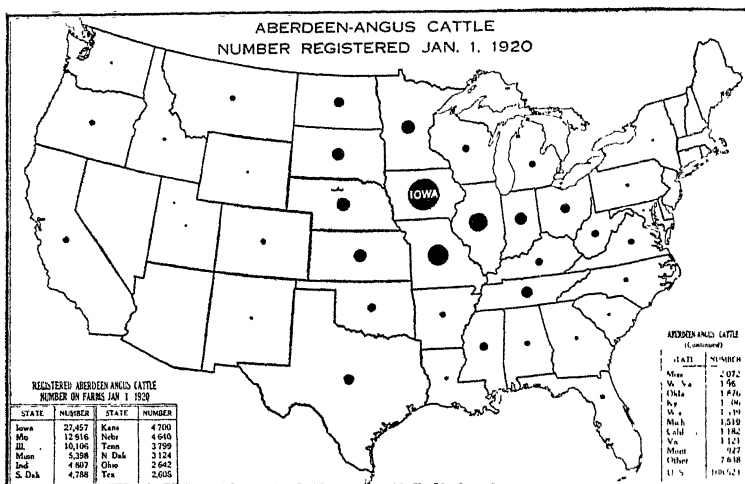


FIG. 14.—Most of the purebred Aberdeen-Angus cattle are in the Corn Belt. Iowa has over one-fourth of the total number in the United States. Missouri and Illinois possess nearly another fourth. The very small number in the Rocky Mountain and Pacific States is noteworthy. The number of cattle in the State is represented by the area, not the diameter, of the circle.

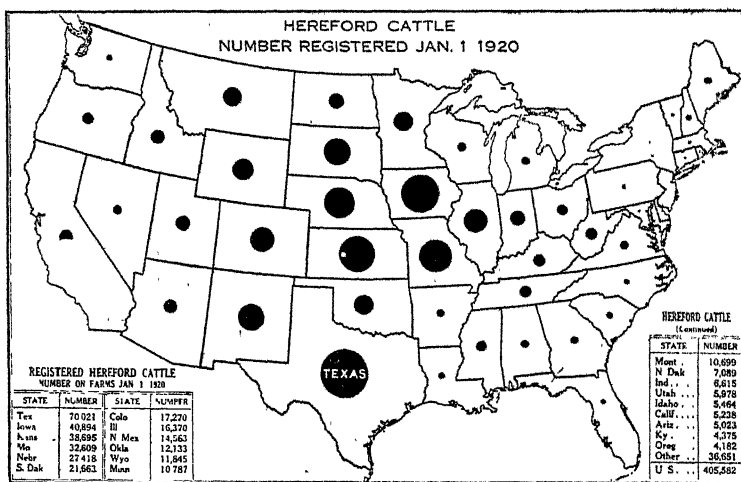


FIG. 15.—Nearly three-fourths of the total number of purebred Hereford cattle in the United States are in the western Corn Belt and the Great Plains region. There are more purebred Herefords in the Rocky Mountain and Intermountain States than of all other breeds of beef cattle. Herefords are good "rustlers," and are especially adapted to semiarid conditions.

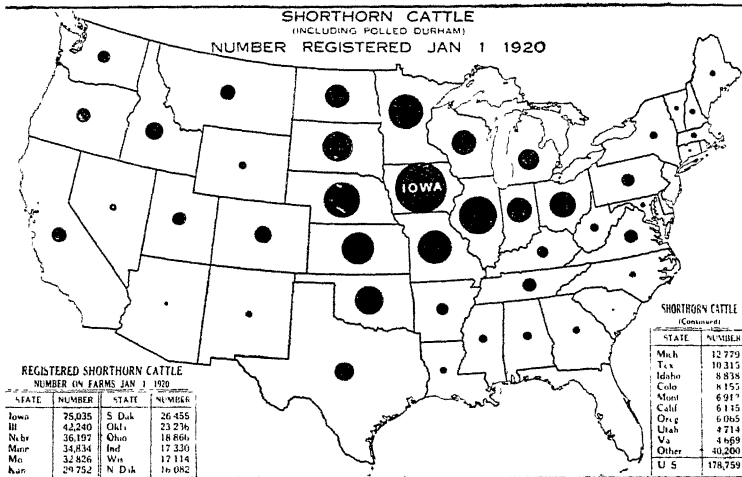


FIG. 16.—Three-fourths of the purebred Shorthorn (including polled Durham) cattle are in the Corn Belt, the Lake States, and the Dakotas. Shorthorns are more numerous than other breeds of beef cattle in the northern and the eastern portions of the Corn Belt and in the dairy States. About one-third of the purebred beef cattle in Kansas are Shorthorns, about one-half in Nebraska and Iowa, two-thirds in Illinois and Minnesota, and three-fourths in Wisconsin, Michigan, and Ohio.

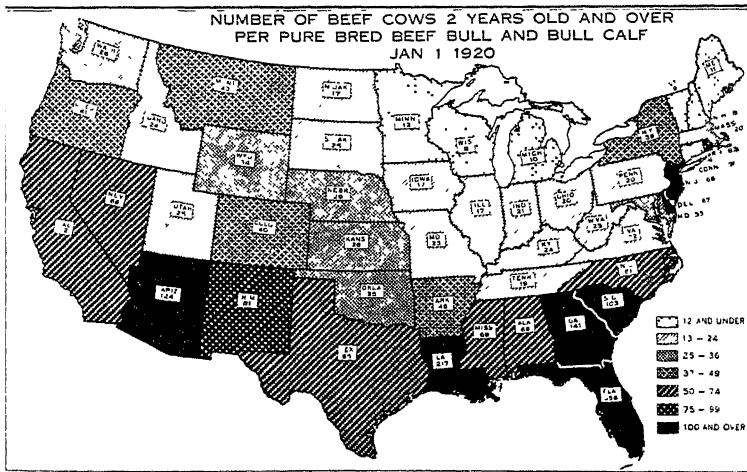


FIG. 17.—Among the important beef cattle regions, the Corn Belt, the Dakotas, Idaho, and Utah are best supplied with purebred beef bulls. The Southern and Southwestern States in particular need a great many more purebred bulls. The dairy districts of the Northwestern and Lake States show fewer beef cows per purebred beef bull, largely because the beef herds are small and scattered. The statistics include beef bulls of all ages.

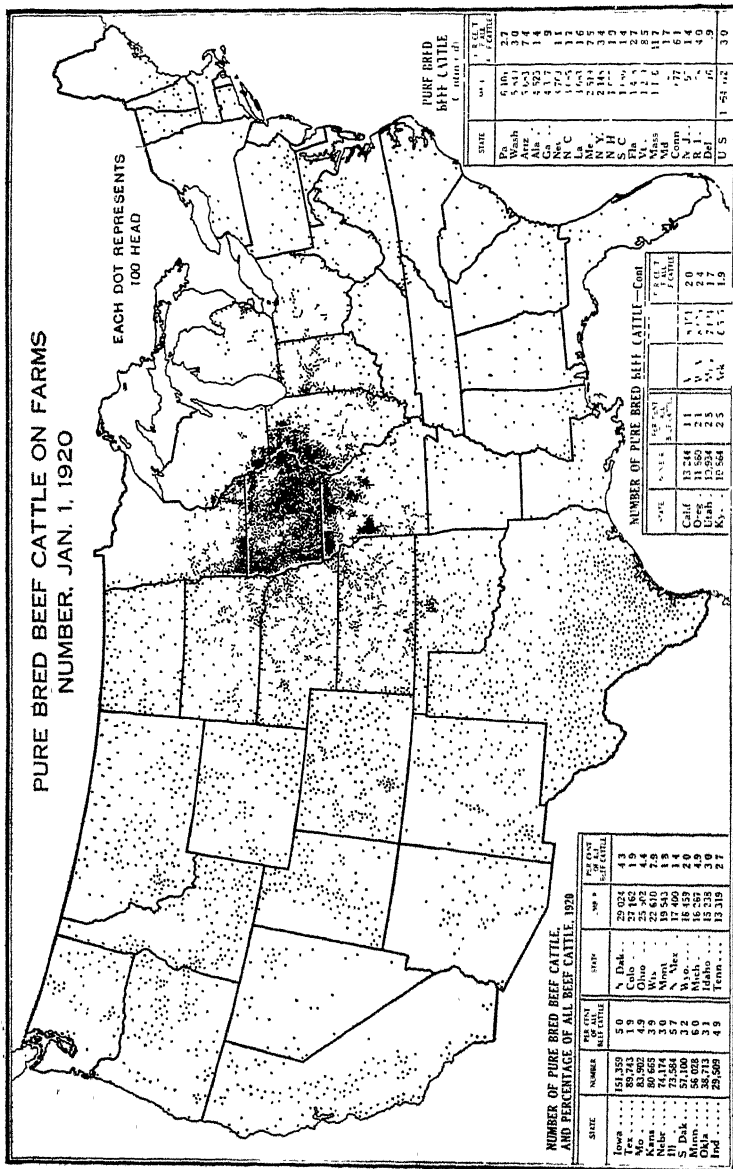


FIG. 18.—Three-fourths of the registered purebred beef cattle in the United States are in a triangular area the points of which are located in central Ohio, central Texas, and northwestern North Dakota. This is the region of abundant and cheap grain and forage. In the United States compare this map with Figure 21 and note how much more concentrated in Iowa and adjacent areas purebred beef cattle are than total beef cattle. The very small number of purebred beef cattle in the Cotton Belt, the Atlantic States, and the Upper Lakes region is noteworthy.

Areas of Beef Production.

For convenience in classifying and discussing beef production, the United States is usually divided into four areas: The Western Range, the Cotton Belt, the Appalachian and Great Lakes Region, and the Corn Belt, as shown in Figure 20. While many beef cattle are raised in all these areas, as Figures 21 to 27 show, and some are fattened for slaughter in all of them, either on grain or grass, the Corn Belt is classified as the fattening area, while the others are considered breeding areas for the production of

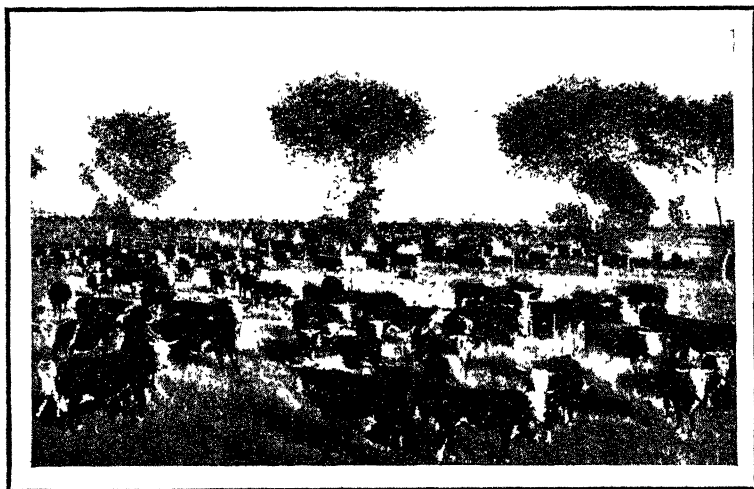


FIG. 19.—A drove of good range bulls with the cow herd in the background. Range bulls should be separated from the breeding herd and fed well during the winter so that they will be in good condition for the breeding season.

stockers and feeders. The adaptability of these regions for beef cattle and the feed requirements or feed used for maintenance and fattening in these regions are very briefly outlined. Much more complete information is given in bulletins published by the department. Some of these bulletins are listed later.

The Western Range.—Less than one-half of the Western Range is privately owned; the rest is unreserved public land, used as free range, State land, and forest, Indian, and mineral reservations. The grazing area on the National Forests in the Western Range region for the season of 1921 supported 2,347,308 cattle and horses and 8,337,356 sheep and goats.

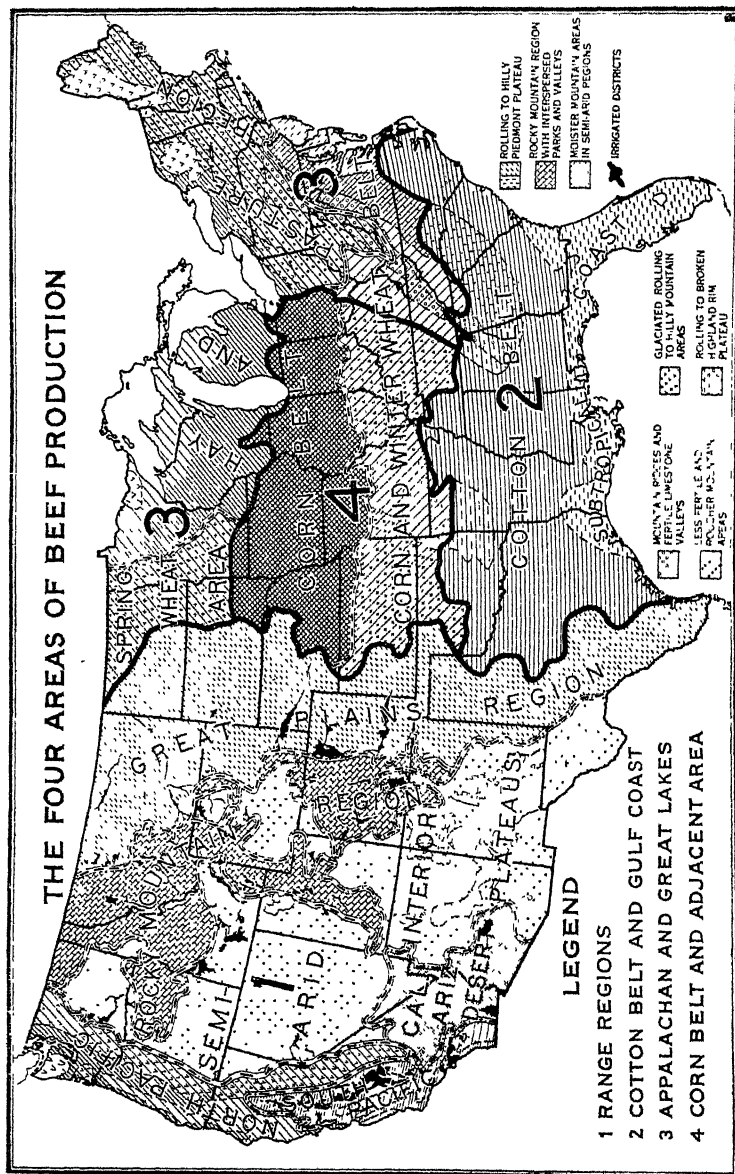


Fig. 20.—The Western Range, being mostly semiarid, is devoted largely to grazing cattle. In the Cotton Belt cattle are raised chiefly on wooded and other unfitted land. Along the Subtropical Coast, largely cut-over pine land and prairies, many cattle are raised in large herds under almost range conditions. In the Appalachian and Great Lakes region cattle are raised in small herds, the cows being kept for milk as well as for their calves. In this region many cattle are fattened on grass alone. The Corn Belt is the principal region for the fattening of cattle. Large numbers are shipped in from the ranges of the West and Southwest.

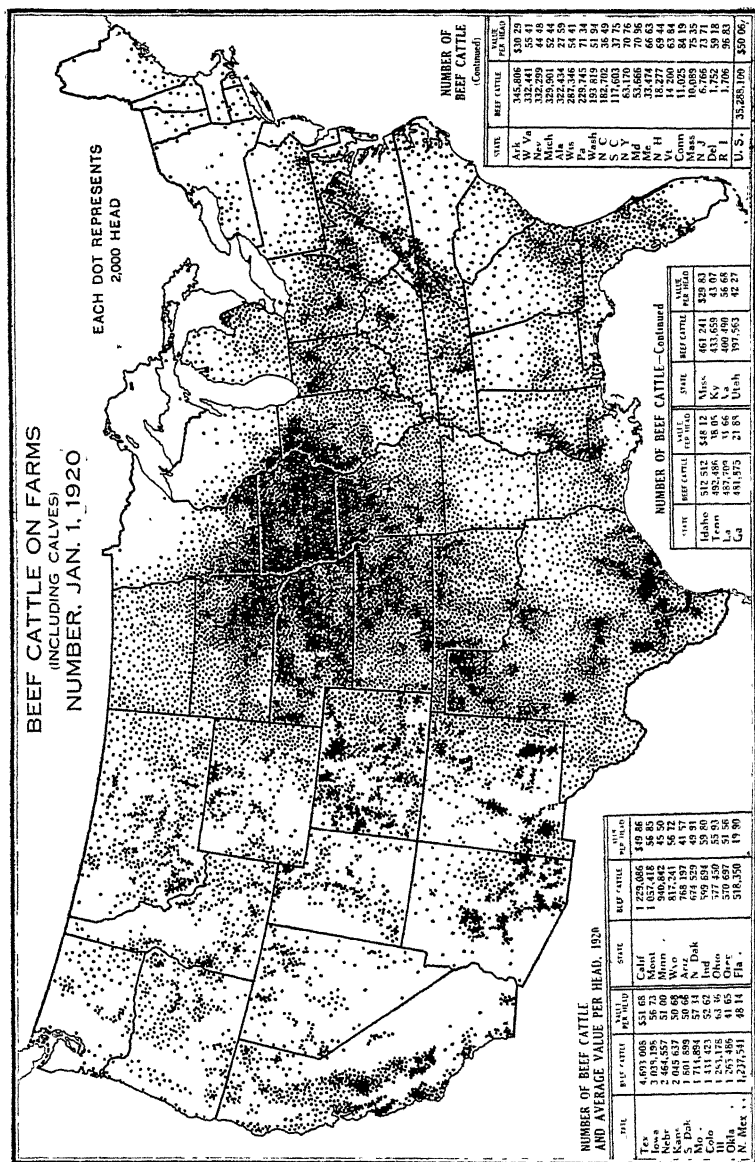


Fig. 21.—Most of the beef cattle in the United States are in that region which was formerly covered with prairie and plains grasses. Pasture supplies summer feed (see Figs. 28 and 29), while the principal winter feeds are corn and sorghum silage and forage (see Figs. 36 and 37), leguminous hays, especially alfalfa (see Fig. 40), wild hay (see Fig. 38), and timothy and other tame grass hays (see Fig. 39). About 40 per cent of the beef cattle are in the Western Range regions, 35 per cent in the Corn Belt and adjacent area, 15 per cent in the Cotton Belt and Subtropical Coast, and 10 per cent in the Appalachian and Great Lakes regions.

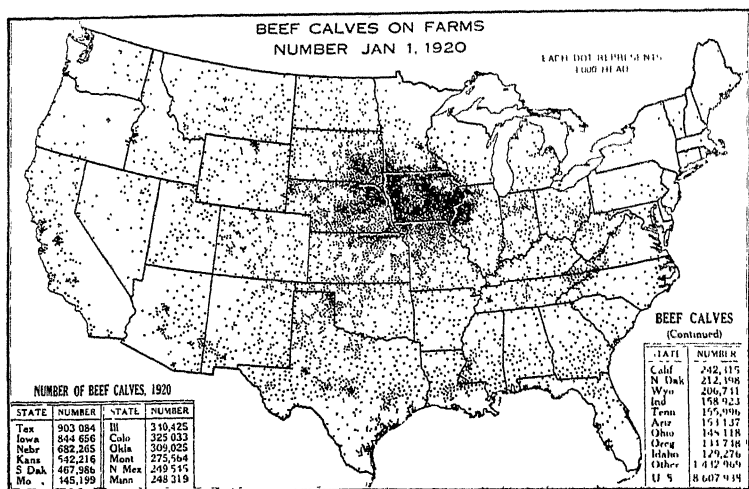


FIG. 22.—Most of the beef calves are on the plains from North Dakota to Texas and in the western part of the Corn Belt. The large number in the western part of the Corn Belt includes many calves which have been shipped in from the Southwest to feed. The total number in the United States on January 1, 1920, was 8,607,938. (Compare with Fig. 26.)

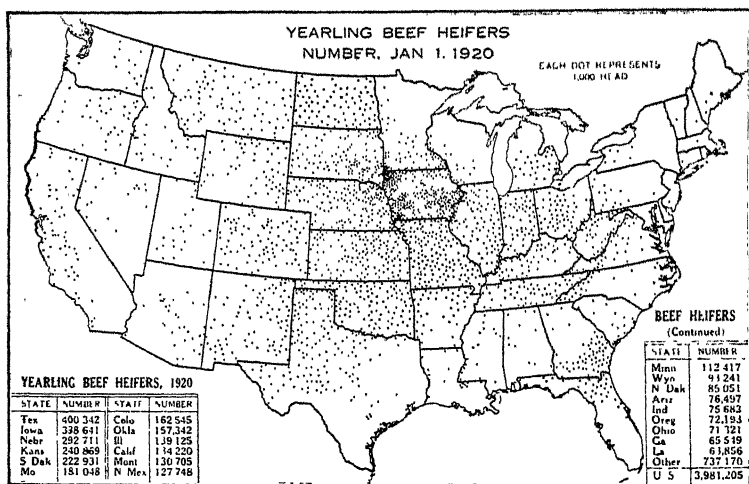


FIG. 23.—There are scarcely half as many yearling heifers as beef calves, shown in Figure 22. In the heart of the Corn Belt there are 40 per cent as many yearling heifers as calves, whereas in the eastern Cotton Belt and Gulf Coast there are 60 per cent. The geographic distribution of yearling heifers is similar to that of the calves. The total number on January 1, 1920, was 3,981,205.

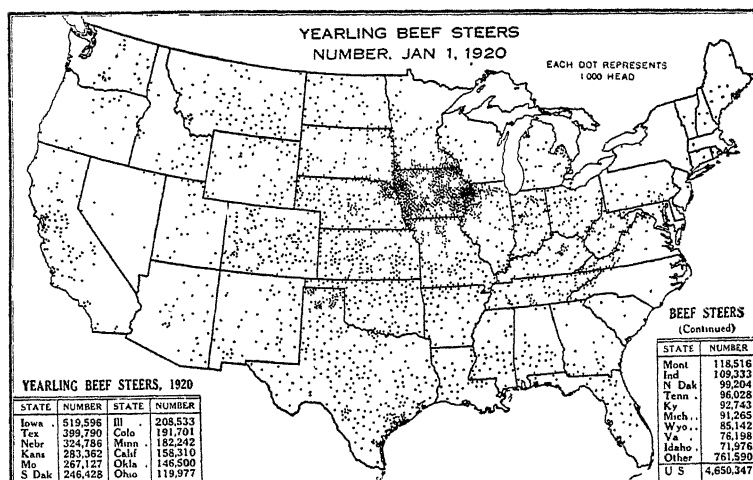


FIG. 24.—There is a much greater concentration of yearling beef steers than yearling beef heifers in the western part of the Corn Belt. (See Fig. 23.) This is explained by the large number that are shipped into the Corn Belt annually for fattening. For the United States as a whole there were about 17 per cent more steers than heifers, the total number on January 1, 1920, being 4,650,347.

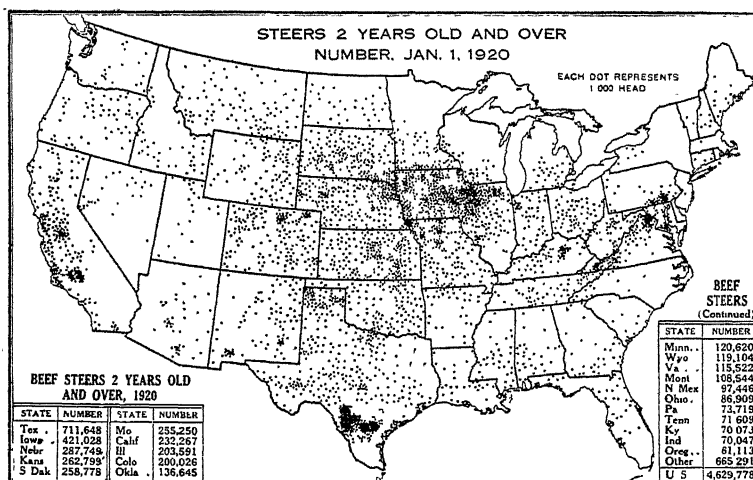


FIG. 25.—The concentration of steers 2 years old and over in certain small feeding areas in the western portion of the Corn Belt is noteworthy. Other feeding centers should be noted in the limestone valleys that extend from southeastern Pennsylvania to eastern Tennessee, in the blue-grass district of Kentucky, in southern Texas and the northern Panhandle, in the beef districts along the North and the South Platte Rivers, and in the San Joaquin Valley in California. The total number in the United States, 4,629,778, was about the same as of yearlings.

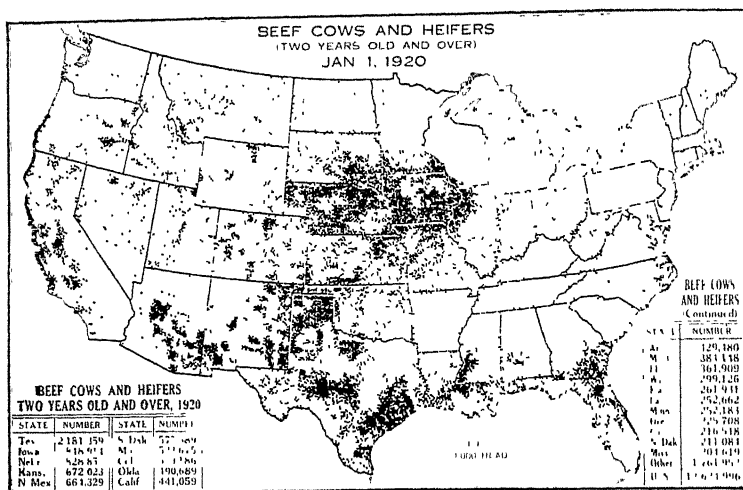


FIG. 26.—The most important breeding grounds of beef cattle are the western portion of the Corn Belt; the Great Plains, especially western Texas and eastern New Mexico and Colorado; the valleys and high plateaus of the far West; and the subtropical coast from Texas to Georgia. Notably sparse are the number of beef cows in the Cotton Belt and in the dairy region of the North Atlantic and Lake States. The total number of beef cows and heifers 2 years old and over was 12,624,906.

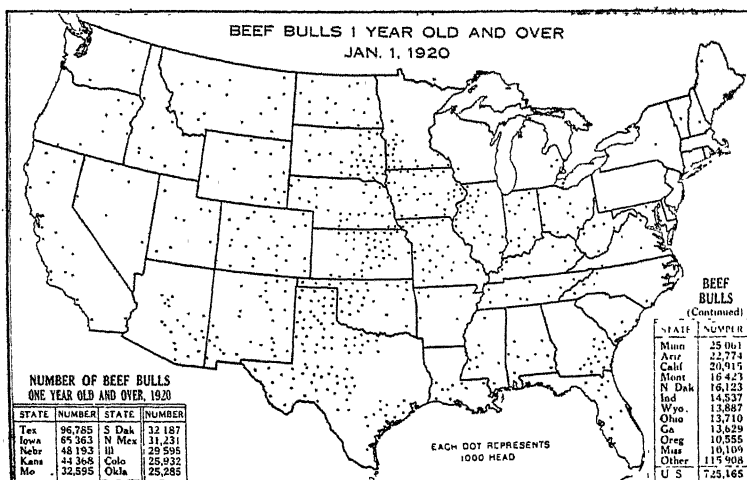


FIG. 27.—The geographic distribution of beef bulls, as one might expect, is similar to that of beef cows; but there is a much larger number of cows per bull in the West than in the East. (See Fig. 17.) In Michigan, Ohio, Kentucky, and Tennessee there were about 10 beef cows and heifers 2 years old and over per bull, in Illinois and Iowa about 13, in Texas and Oklahoma about 20, and in the Rocky Mountain and Pacific States from 20 to 25. The total number of beef bulls in the United States was 725,165, which gives an average of 17 cows per bull.

Owing to the great diversity of topography, soil, rainfall, and temperature in the Western States it is very difficult to classify the range according to its carrying capacity. In areas of equal carrying capacity there is often a considerable variation in the length of the grazing season on account of variations in altitude. However, the Western States have been divided into the 25 areas given in Table 2. Within these areas the bulk of the range falls within reasonably definite limits as to carrying capacity and length of the grazing season, the season being shorter in the higher altitudes which are used for summer grazing, as shown in Figures 28 and 29. The lower altitudes are used for winter grazing, which is supplemented with hay when the range is covered with snow. In the southern part of the Western Range the cattle are grazed during the winter, usually without supplemental feeds.

TABLE 2.—*Character of forage and estimated capacity of the western grazing areas of the United States.*

Areas.	Chief forages.	Length of season.	Area to support a cow.
		Months	Acre
Northern Great Plains.....	Grass, grama-buffalo, wheat grass.	5 to 8	15 to 25
Southern Great Plains.....	Grass-buffalo.....	5 to 10	15 to 25
Black Hills.....	Grass, short grasses.....	3 to 5	25 to 30
Central Rocky Mountains.....	Mountain weeds and grass.....	3 to 5	20 to 25
New Mexico-Arizona mountains.....	Grass, browse.....	6 to 12	25 to 30
West-central and northwestern Montana.	Pine grass.....	3 to 7	35 to 40
Southwestern Montana.....	Short grasses.....	3 to 6	20 to 25
Northern Rocky Mountains.....	Bunch grass, browse.....	3 to 6	60 to 150
Central Idaho.....	Bunch grass, weeds, browse.....	3 to 7	25 to 30
Wasatch, Uinta, and Wyoming Mountains.	Grass, browse.....	3 to 7	20 to 25
Northeastern Nevada, southern Idaho, and central Oregon.	Bunch grass, sagebrush.....	4 to 8	35 to 40
East-central Nevada mountains.....	Bunch grass, browse.....	4 to 6	25 to 50
Wyoming semideserts.....	Sagebrush, shadscale, greasewood, short bunch grasses.	2 to 4	50 to 100
Utah-Arizona deserts.....	Browse.....	2 to 5	75 to 150
New Mexico-Arizona foothills.....	Browse, tobosa, grama grass.....	4 to 8	30 to 60
San Luis Valley of Colorado.....	Greasewood, salt and short grass.	7 to 9	30 to 40
Utah foothills and valleys.....	Sagebrush, bunch, salt, and June grasses.	5 to 7	25 to 30
Mohave Desert ¹ of California.....	Annual weeds, browse.....	.....	640
Nevada semideserts.....	Shadscale, greasewood, browse.	1 to 4	75 to 150
Southeastern Oregon and Snake River plains.	Sagebrush and bunch grass.....	2 to 5	50 to 100
Columbia River Basin.....	Bunch grass.....	7 to 9	10 to 30
Eastern California mountains.....	Browse and bunch grass.....	3 to 6	25 to 35
Western Oregon mountains.....	Browse.....	3 to 7	75 to 100
Southwestern California mountains.....	Browse.....	6 to 12	40 to 60
California-Oregon mountain valley.....	Grass and weeds.....	6 to 8	10 to 25

¹ The grazing season on the Mohave Desert depends on the availability of water for the cattle.

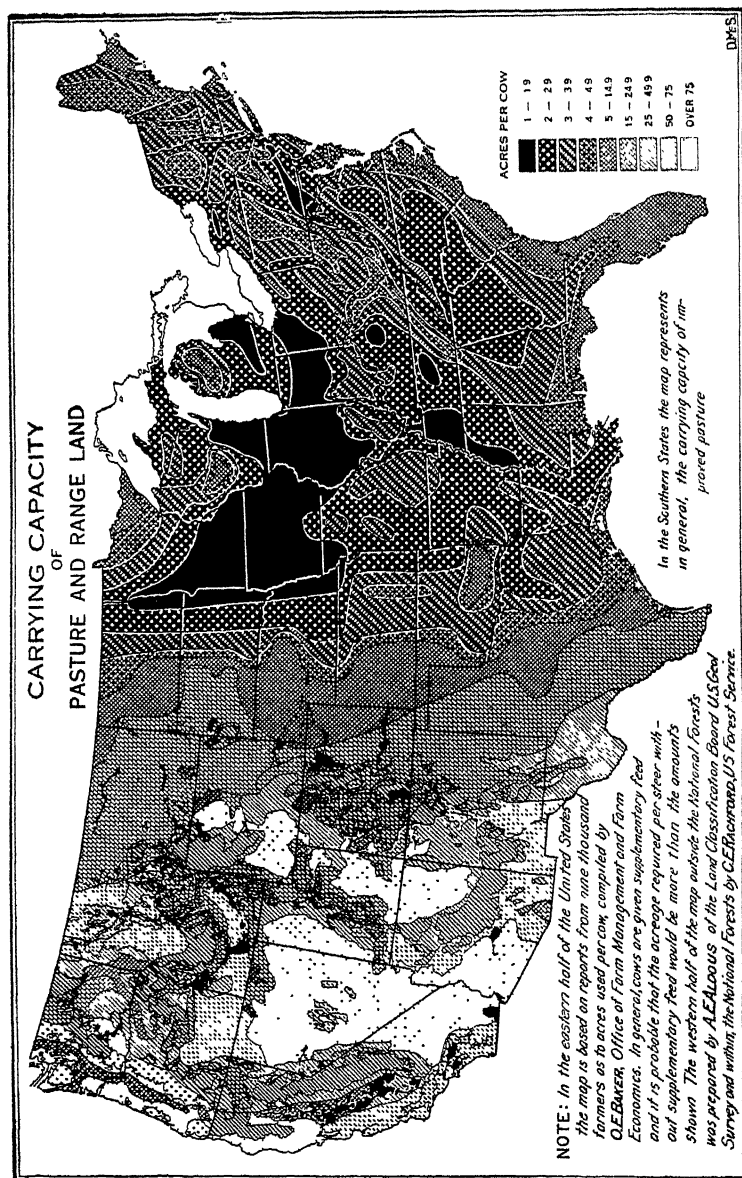
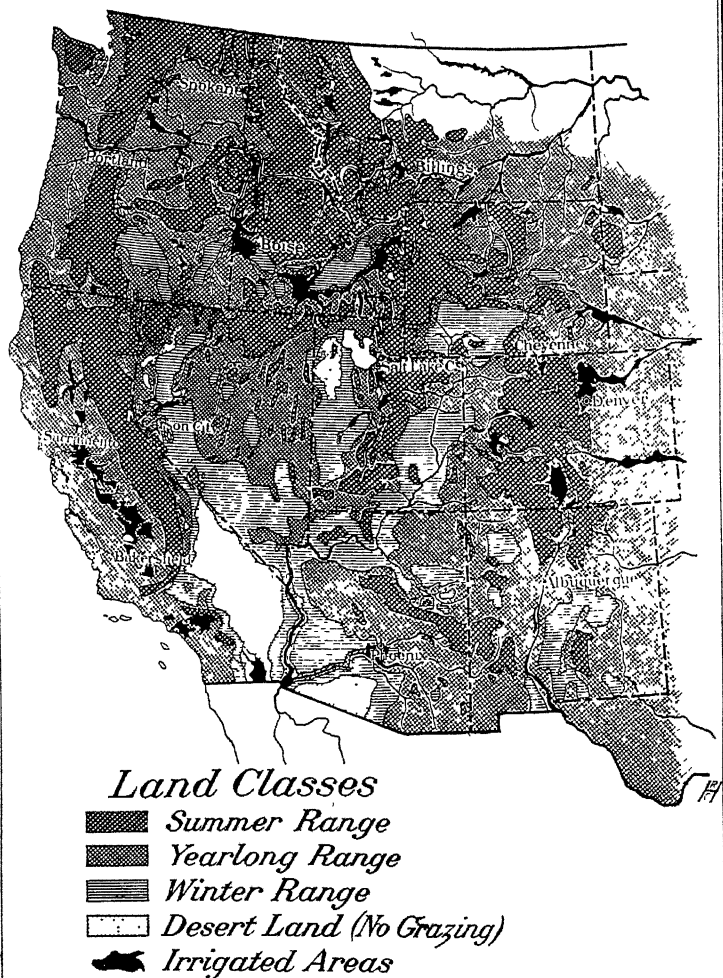


FIG. 28.—During the summer season most of the beef cattle in the United States are kept on pasture. The acreage of pasture in the United States is two and a half times that of all crops, and its value in the production of beef cattle probably is equal to that of all crops. There are about 70 million acres of improved pasture and probably 150 million acres of unimproved pasture in farms, 200 million acres of woodland pasture in farms and in the national forests, and about 500 million acres of arid or semi-arid open range land in the West. The carrying capacity indicated on the map is an average of the different kinds of pasture occurring in the locality, and represents only the land actually used for pasture.

WESTERN RANGE GRAZING SEASON AREAS



ADAPTED FROM MAP PREPARED BY ALBERT F. POTTER, U.S. FOREST SERVICE

FIG. 29.—In the summer the cattle in the West near the mountains are commonly driven up into the national forests, which contain large areas of open grass land and parks, as well as abundant browse. In the Great Plains region, in western New Mexico and Arizona, and in the Pacific States, also in much of Nevada, cattle are grazed the year round on the range, commonly with supplementary winter feed. The winter range is mostly desert and used more largely for grazing sheep than cattle. Many cattle are fattened in the irrigated areas. The map, originally prepared by A. F. Potter, formerly of the Forest Service, has been revised by O. C. Stine, Bureau of Agricultural Economics. It does not extend to the eastern boundary of the range area, which is about 200 miles farther east. Nearly all this area not shown is yearlong pasture.

The Cotton Belt.—In considering the beef-cattle industry of the Cotton Belt, certain areas where cotton is not the chief crop are included, such as the mountainous regions of Alabama, Georgia, Arkansas, and Oklahoma, and the prairies of southern Florida, Louisiana, and southern Texas. On the prairies the cattle are handled in large herds, somewhat as they are in the Western Range, but in the Cotton Belt proper there are commonly only a few cattle on each farm. Grazing throughout the year can usually be depended upon. In this region the production of Brahman cattle is becoming well established. They are growthy, prolific, stand the heat and

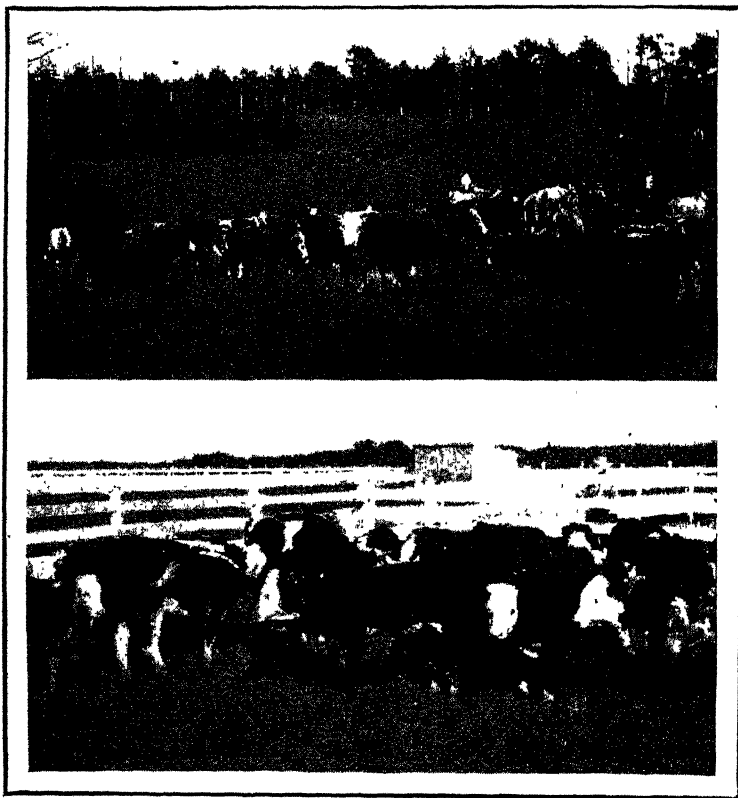


FIG. 30.—The upper picture shows a purebred beef bull, scrub cows, and first and second cross cows and calves in a Cotton Belt herd. The lower picture shows a drove of second-cross calves which were produced by such a grading-up process. A pressing need in the South is more purebred beef cattle. (See Fig. 17.) A general grading up of the quality of the cattle in the South would greatly increase the productivity and profitableness of the industry.

parasites better, and are more resistant to Texas-fever ticks than other cattle.

On the cut-over pine lands of the coastal plains, extending from North Carolina to Texas, most of the cattle run on the range the year around. It requires from 5 to 20 acres of such pasture per cow. The chief grasses are wire grass and broom sedge, which have a low feeding value. The



FIG. 31.—Brahman bulls in the tick-infested portions of southern Texas and the Gulf Coast region have proved valuable for crossing with the native beef cattle. Immunity from Texas fever extends normally to cattle having as little as one-eighth Brahman blood. As the tick is exterminated purebred bulls of other breeds should be introduced.



FIG. 32.—Piney woods steers make good oxen of considerable size for use in lumbering when they are well fed. The virgin longleaf pine forests, such as are shown in this picture, are being rapidly used up. This cut-over land should be utilized to the best advantage. The best of it may be used for crops, but the greater part is better suited for grazing, and the remainder is fit only for reforestation.

cattle do well until about midsummer, after which time they scarcely hold their own unless improved pastures are available. The best grasses known to improve the piney-woods pasture are Bermuda for the richer soils, carpet grass for the moist flatwoods, and Natal grass for the drier, poorer soils. Lespedeza (Japanese clover) is a good pasture and hay crop throughout most of this area.

In central Texas and Oklahoma cattle are raised on large fenced pastures, which are supplemented during the winter with cottonseed cake, hay, and grain sorghums. On cotton plantations the cattle are kept on woodland pasture and abandoned cotton fields and stalk fields. The chief forage plants are lespedeza and Bermuda grass.

In the Ozarks and the mountainous parts of northern Alabama and Georgia most of the cattle are raised on small farms. The cattle are wintered chiefly on corn and cotton stalk fields, stover, hay, corn silage, and cottonseed meal.

Quantities of Feed Used in the Cotton Belt.—Table 3 is based upon records kept on 1,383 head of cattle. To find

TABLE 3.—*The amounts of feed used per 1,000 pounds live weight for wintering cows, calves, yearlings, and 2-year-old steers in the Cotton Belt.*

Number in tests.	Location and class of cattle.	Feeding period.	Average initial weight.	Gain (+) or loss (−) in weight per head.	Feed per 1,000 pounds live weight.					
					Protein meal.	Grain.	Legumes and mixed hay.	Stover, coarse hay, and straw.	Silage.	Stalk fields and winter pasture.
		Days.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Acres.
63	In Arkansas: Cows.....	150	913	+35	252	57	686	778	3,827	(1)
261	In Mississippi: Cows.....	94	808	−53	249	.....	686	303	15	² 5.25
68	Calves.....	118	381	+28	399	375	908	821	475	³ 2.00
46	In Tennessee: Yearlings....	126	563	+1	308	.....	.....	382	4,128	.....
35	In Alabama: Yearlings....	115	616	+71	439	.....	2,392	.....	.....	.....
235	2 to 3 year olds	99	674	−35	94	.....	.....	580	.....	(4)

¹ On scant pasture and stalk fields, 44 days of feeding period in fall and spring.

² On cotton or corn stalk fields, all of winter feeding period.

³ Acreage is approximate and consisted principally of winter oats, wheat, and early spring clover pasture.

⁴ On open range pasture all of winter feeding period.

the amount of feed required for cattle of any weight, divide the amounts of feed in the table by 1,000 and multiply the results by the weight of the cattle to be fed. From the map (Fig. 28) one can determine the acreage of improved pasture required for the remainder of the year.

Formerly, practically the only ration used for dry-lot fattening of steers was cottonseed meal and cottonseed hulls. Now, much silage, both sorghum and corn, velvet beans, rice by-products, blackstrap molasses, and considerable legume

TABLE 4.—*The amounts of feed used per 100 pounds gain to fatten steers, classified by weight (300–600 pounds, 600–900 pounds, and 900 pounds upward), in the Cotton Belt.*

Number in tests.	Feeding methods.	Feeding period.	Average initial weight.	Total gain per head.	Protein meal fed.	Grain.	Legume and mixed hay.	Stover, coarse hay, straw, and hulls.	Silage.	Molasses.
	Dry-lot feeding:	Days.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
728	Without silage...	120	467	195	181	159	118	383	626	0.2
791	.....do.....	96	820	174	247	147	51	991	.....	14.0
1,079	With silage.....	117	780	231	247	144	18	170	1,655	7.0
604	.....do.....	102	1,000	179	335	283	47	636	868	7.0
	On summer pasture in Alabama and Mississippi:									
65	No supplement.....	130	560	210	.....	.....	.....	.....	.....	.....
192	With cottonseed cake...	133	532	226	202	.....	.....	.....	.....	.....
171	No supplement.....	130	660	203	.....	.....	.....	.....	.....	.....
338	With cottonseed cake...	128	674	232	217	.....	.....	.....	.....	.....
93	Cottonseed cake and corn.....	154	504	226	112	197	.....	.....	.....	.....
59	Cottonseed cake and alfalfa.....	101	532	162	236	.....	119	.....	.....	.....
	On summer pasture in western North Carolina:									
545	No supplement.....	143	704	321	.....	.....	.....	.....	.....	.....
98	With cottonseed cake...	131	734	361	135	.....	.....	.....	.....	.....

hay are used (see Figs. 36 to 40). Table 4 shows the amounts of feed required to fatten steers in the Cotton Belt, based on records kept on 4,763 head. As the amount of feed required per 100 pounds gain increases appreciably with the age of the steers, they have been classified by initial weight (definite age records not being always available), as follows: 300 to 600 pounds, 600 to 900 pounds, and 900 pounds upward. The 600 to 900 pound steers were divided to show the amounts of feed required in rations with and without silage. To obtain the feed required per steer, divide the amounts of feed in the table by 100 and multiply the result by the total gain per steer.

The Appalachian and Great Lakes Region.—In this region feeding records are from the upland limestone pastures of Virginia, West Virginia, and North Carolina, which supply grass-fat steers to the eastern markets. Most of the cattle are produced on small farms. About one-third of this area is improved farm land. Much of the rest is too rough for profitable cultivation, but can be cleared and used as pastures for beef cattle. From 2 to 10 acres will fatten a steer or carry a cow and her calf for seven to nine months. Cattle are wintered on stover, hay, corn, silage, and

TABLE 5.—Amounts of feed used per 1,000 pounds live weight to winter cattle in the Appalachian Region.

Number of tests.	Class of cattle.	Feeding period.	Initial weight.	Total gain per head.	Feed required per 1,000 pounds live weight.						
					Cottonseed meal.	Corn.	Wheat bran.	Mixed hay.	Wheat straw.	Shock corn.	Corn silage.
	In West Virginia:	Days.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
120	Cows.....	132	827	+13	80	.....	.....	843	636	184	3,445
90	Calves.....	134	384	+66	130	182	65	1,023	.....	.....	2,857
130	Yearlings.....	130	665	+11	68	.....	.....	1,119	648	.....	2,859
120	Two-year olds..	127	955	+46	55	.....	.....	621	121	.....	3,314
	In North Carolina:										
675	Two to three year olds ¹	123	745	—38	16	61	.....	.....	953	.....	1,529

¹ One-fifth of these steers depended upon winter pasture, excepting for a period of about 2 weeks when snow covered the ground, while the other four-fifths had no pasture. The average number of days of pasture for all was 42.

cottonseed meal in the more productive sections of Pennsylvania, Maryland, Virginia, and West Virginia. There are



FIG. 33.—On the excellent blue-grass pastures in the central Appalachian region many steers are finished on grass alone for the eastern markets. In some instances either corn, cottonseed meal, or both, are fed to the steers on pasture. The upper picture shows cattle turned onto pasture in the middle of April. The lower shows cattle ready to market in September.

very few beef cattle in the Great Lakes part of this region (see Figs. 2, 14 to 18, and 21 to 27).

Table 5, based on records of 460 head, shows the quantities of feed required per 1,000 pounds live weight to keep cows, calves, yearlings, and 2-year olds through the winter feeding period. To convert the amounts of feed to feed per head, divide the quantities by 1,000 and multiply the result by the average weight of the cattle to be fed.

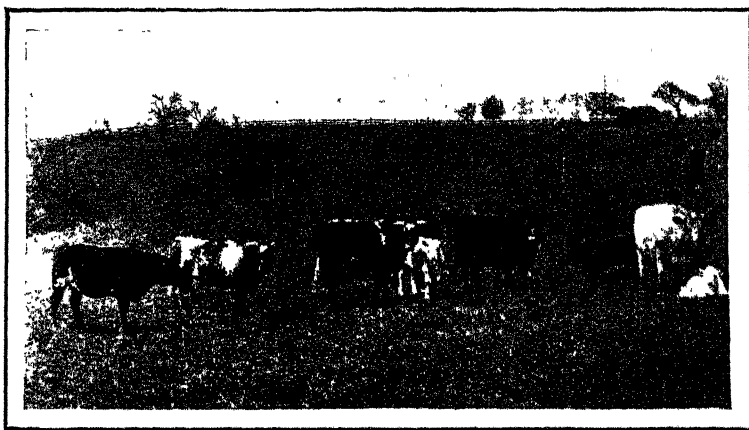


FIG. 34.—Many farmers in the Appalachian region keep a few cows such as these to produce milk for the family and raise good beef calves. The rich pastures in this region permit the production of cattle at a lower cost than where heavy feeding is necessary.

The Corn Belt.—In the Corn Belt over 25 per cent of the corn crop is fed to beef cattle. While there is relatively little land too rough for crop production, there is some land in almost every community which can be utilized for cattle pastures to advantage. Pasture furnishes practically all the feed for the breeding herds from May 1 or May 15 to November 15 or December 1 (see Fig. 28). Cornstalk fields are utilized during the early winter. Table 6 gives the quantities of feed, pasturage, and labor required for carrying cows, raising calves, and fattening baby beeves.

Most of the cattle fattened in the Corn Belt area are bought in the fall as 2-year-olds from the Western Range. They

are fed during the winter and spring months on home-grown feeds (see Figs. 36 to 40), and usually marketed before June 1, when the marketing of grass-fed cattle from the Southwest usually begins. In eastern Kansas, Nebraska, and western Iowa, corn, clover, and alfalfa are the chief feeds, while in Indiana and Illinois corn, mixed hay, silage, and a protein meal make up the standard ration. On farms having considerable rough land, the most economical gains are obtained by fattening on corn and grass. This



FIG. 35.—Steers in a Corn Belt feed lot. In a fattening period of 150 days such steers will eat a ton or more of dry roughage per head in addition to corn and other concentrates. In this way a large part of the hay, straw, and stover, for which there is no other market, is utilized profitably by converting it into beef.

is the most common method in Missouri. Central Kansas and southwestern Wisconsin are the chief areas for fattening cattle on grass alone. Table 7 gives the quantities of feed, labor, and pasturage required to produce 100 pounds of gain in the Corn Belt, based on the feeding of 54,979 cattle.

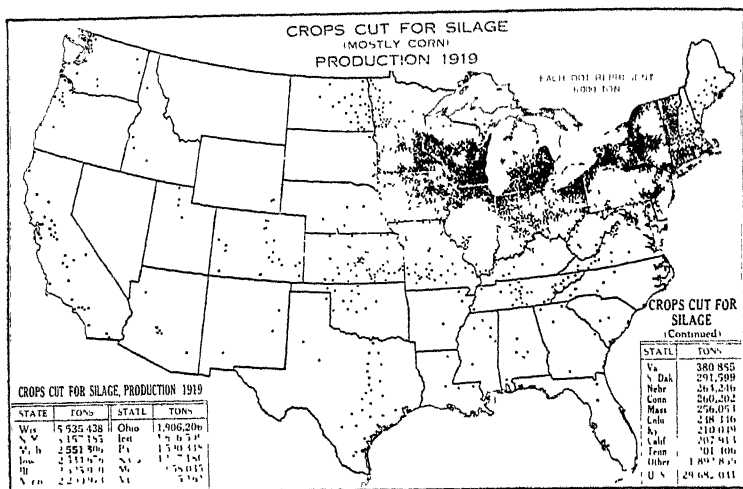


FIG. 36.—Nearly all the silage in the United States is made from corn. Most of this silage is fed to dairy cattle, but the use of silage for wintering beef cows and young cattle and for fattening steers is increasing rapidly, especially in the Corn Belt. The large amount of silage now produced in Iowa, Kansas, and eastern Colorado is noteworthy. Each dot on the map represents 2,000 tons, which is estimated as roughly equivalent to 2,000 tons of hay.

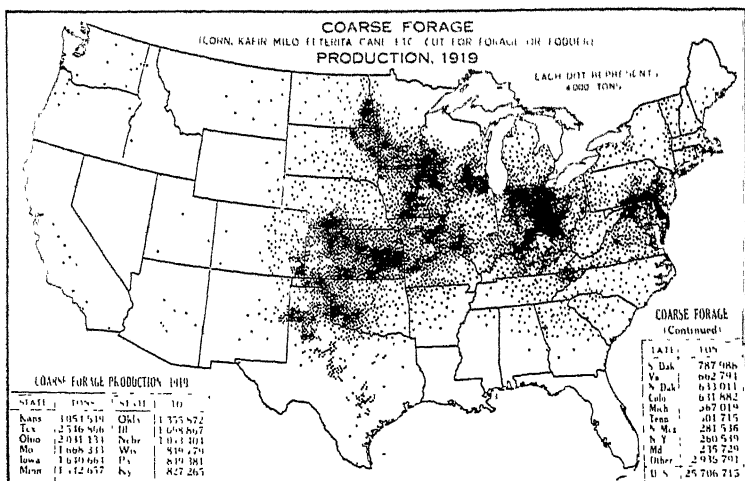


FIG. 37.—Corn is cut for forage very largely around the margin of the Corn Belt and in Kansas. In southwestern Kansas, western Oklahoma, and western Texas kafir and milo replace corn as a forage crop. Some of the forage shown in the south central and southern States is sweet sorghum. A large part of this coarse forage is used to feed beef cattle, especially in the region extending from Iowa to Texas. (See Fig. 21.)

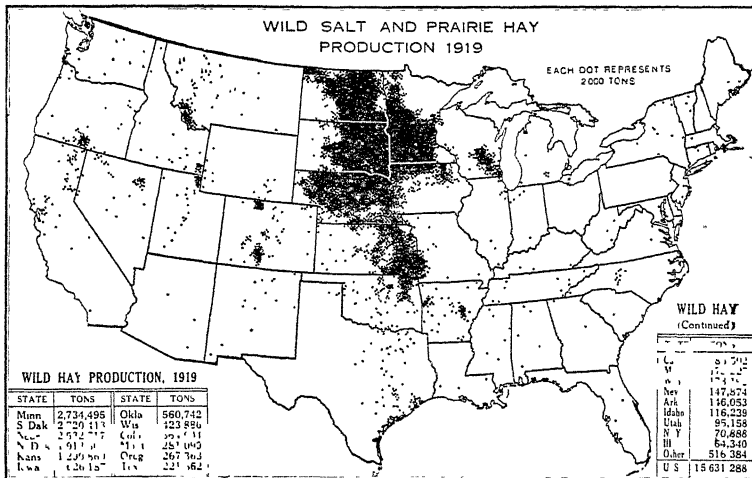


FIG. 38.—Wild or native hay is used very largely for wintering cattle in the Spring Wheat Region, the western portion of the Corn Belt, along the eastern margin of the Great Plains, and in the higher valleys and plateaus of the Western Range regions. (See Fig. 20.) These are regions having sufficient rainfall to produce a growth of native grass tall enough to cut for hay, but not sufficiently moist, especially in winter, to secure higher yields of clover, timothy, and other tame grasses. Supplemented by some feed rich in protein, these wild hays are quite satisfactory for wintering cattle.

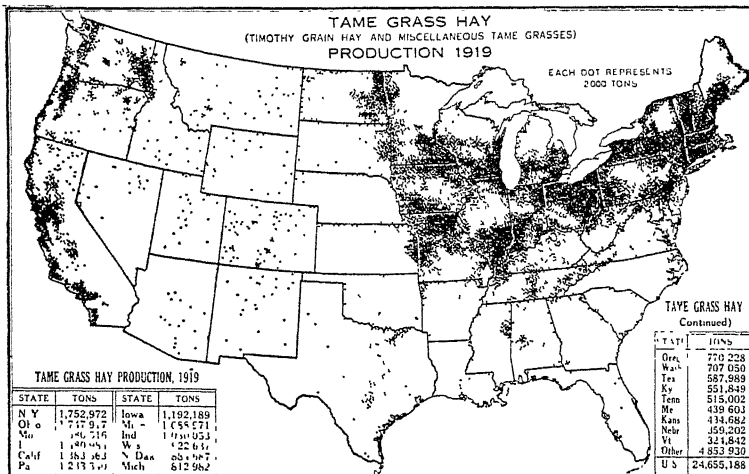


FIG. 39.—Most of the hay shown in the northeastern quarter of the United States is timothy. The much smaller amounts in the South are largely Bermuda and Johnson grass, while along the Pacific Coast grain hay is the leading variety. These hays also should be supplemented by some feed rich in protein, in order to bring cattle through the winter in good condition. These hays are not used extensively for feeding beef cattle. (See Fig. 21.)

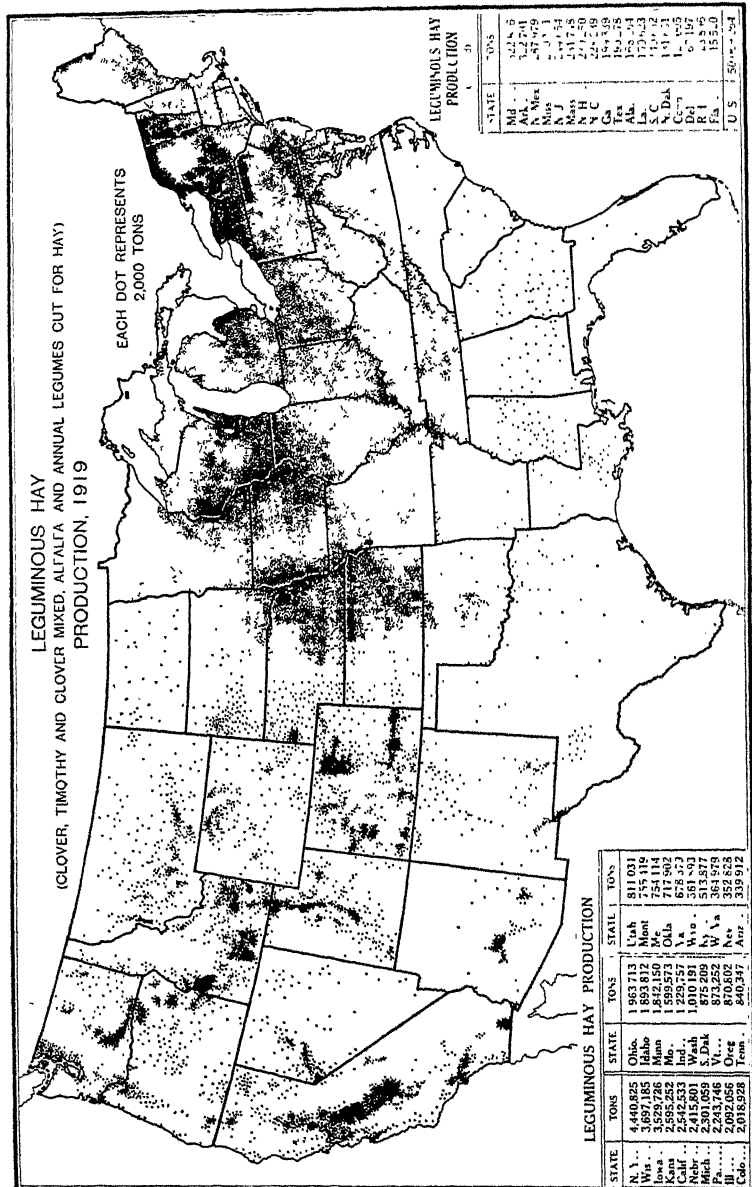


FIG. 40.—West of the Missouri River the leguminous hay is almost wholly alfalfa, east of the Missouri and north of the Cotton Belt it is mostly timothy and clover mixed and clover alone. Clover includes red, alsike and crimson clover and several other legumes of less importance. The scattered dots in the Cotton Belt represent mostly cowpeas and soy beans cut for hay, and lespezeda. A large part of the alfalfa in the West, and of the timothy and clover in the Corn Belt, is fed to beef cattle.

Cost of Beef Production.

The factors which make up the cost of producing beef cattle may be grouped into four general classes.

The first of these is the initial cost of the cattle on the farm or ranch. If they are purchased elsewhere to be delivered by the purchaser, the cost of such delivery should be added to the purchase price.

The second general group of costs, which may be called "operating expenses," include charges for range or pasture, feed and salt, labor, taxes on cattle, insurance, veterinary costs, death risk, and incidentals. The charge for range or

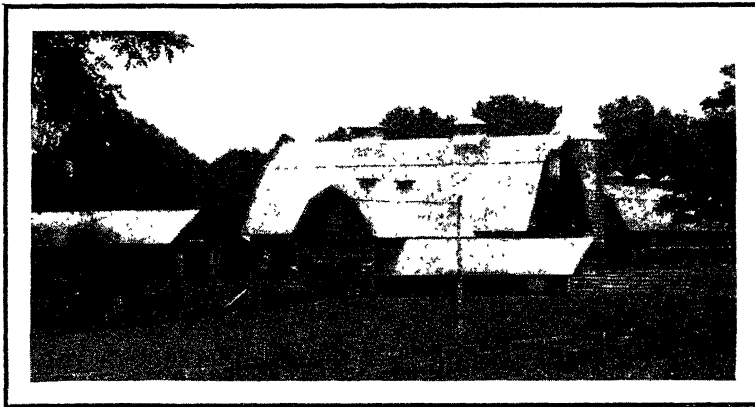


FIG. 41.—Equipment for producing beef cattle need not be expensive. They do need shelter from cold winds and rains. Barns, cribs, and silos for storing feed should be substantial and so constructed that they give the maximum ventilation consistent with the protection needed.

pasture is the sum of the interest on the value of the land, taxes on the land, and the annual cost of fencing and repairs. When feed is raised it is charged to the cattle at current farm prices. Losses from death should be borne by the animals that live to be marketed. The incidental charges cover office expenses, legal fees, telegrams, and trips to market.

The third group covers the "building and equipment charges," which should take care of the annual depreciation and repairs.

The fourth group includes interest on capital invested in the cattle, buildings, equipment, feed, and funds necessary to meet miscellaneous expenses.

The sum of these four groups of costs, (1) the initial cost of the cattle, (2) the operating expenses, (3) the building and equipment charges, and (4) interest on capital invested, is the gross cost of production.

The value of by-products arising from the cattle business, such as manure, gains of hogs following fattening steers, and milk produced by the breeding herd, should be subtracted from the gross cost to determine the net cost.

Cost figures covering the raising and fattening of cattle, showing the quantities of feed, pasture, and labor necessary in keeping a breeding herd and in producing yearling feeder steers, have been gathered only for cattle in the Corn Belt.

Raising Calves and Fattening Baby Beeves.

The figures in Table 6 were gathered on farms covering three different methods of handling the breeding herd and of feeding calves up until they were yearlings, namely, (1) using cows partially milked, the calf taking the rest, (2) beef cows, and (3) baby beef—the calves getting all the milk in Groups 2 and 3. The calves of Groups 1 and 2 were carried as stockers during their first winter, while the calves of Group 3 were fattened as baby beeves on a grain ration and sold for slaughter at about 15 months of age. While the average quantities of grain and man labor used during a year were greatest for the cows partially milked, the milk, cream, and butter received from the partially milked cows normally more than pay for the extra feed and labor put on them. Normally the cost of pasture, winter feed, and labor make up about 83 per cent of the total cost of keeping a partially milked cow, and 80 per cent of the total cost of keeping a cow for the production of feeder steers or calves to be fattened. The feed and labor made up from 85 to 87½ per cent of the total cost of carrying the calves through the winter. The net cost of carrying a calf through the winter added to the cost of the weanling calf in the previous fall gives the total cost of the yearling at 12 to 15 months of age.

TABLE 6.—Quantities of feed and labor required and the computed cost of keeping cows to produce calves and of carrying the weanling calves to short yearlings as stockers or as baby beef (Corn Belt).

Systems of production.	Quantities			Values. ¹		
	Partially milked cows.	Beef cows.	Baby beef cows.	Partially milked cows.	Beef cows.	Baby beef cows.
KEEPING A BREEDING COW ONE YEAR.						
Number of cows under study.....	1,541	11,261	4,572	.....	.....	.....
Feed:						
Pasture.....days..	200	194	197	\$10.00	\$9.70	\$9.85
Hay.....pounds..	1,940	1,900	1,940	9.70	9.50	9.70
Silage.....do....	600	700	740	1.20	1.40	1.48
Straw.....do....	580	660	500	.58	1.10	.50
Corn.....bushels..	4.75	2.2	2.5	2.58	.66	1.25
Corn stalks.....acres..	1.75	1.42	2.0	1.75	1.42	2.00
Feed cost.....				25.61	23.78	24.78
Labor:						
Man hours.....	47.2	15.3	16.7	9.44	3.06	3.34
Horse hours.....	9.8	10.4	9.6	.98	1.04	.96
Other expenses...per cent of gross cost..	17	20	20	7.38	6.97	7.27
Gross cost of carrying cow one year..				43.41	34.85	36.35
Deductions for by-products.						
Manure.....loads..	4.5	4	4	4.50	4.00	4.00
Milk.....gallons..	38			3.42		
Cream.....do....	11			8.25		
Butter.....pounds..	16			4.00		
Skim milk.....do....	1,000			2.00		
Total deductions.....				22.17	4.00	4.00
Net cost of carrying cow one year.....				21.24	30.85	32.35
Cows kept per calf raised.....	1.143	1.179	1.163			
Cow cost per calf.....				24.28	36.37	37.63
Bull cost per calf.....				3.47	2.36	2.45
Cost of calf at weaning.....				27.75	38.73	40.07

¹ The values given are based on the following prices for feed and labor:

Pasture.....	per head per day..	\$0.05
Hay.....	per ton..	10.00
Silage.....	do....	4.00
Protein meal.....	do....	35.00
Straw.....	do....	2.00
Fodder.....	do....	2.00
Corn.....	per bushel..	.50
Cornstalks.....	per acre..	1.00
Man labor.....	per hour..	.20
Horse labor.....	do....	.10

² To obtain the cost per calf raised to weaning age of 6 to 8 months, the number of cows kept per calf is multiplied by the cost of keeping a cow one year. To this product, is added the proportionate cost of keeping a bull per calf raised under the various systems.

TABLE 6.—Quantities of feed and labor required and the computed cost of keeping cows to produce calves and of carrying the weanling calves to short yearlings as stockers or as baby beef (Corn Belt)—Continued.

Systems of production.	Quantities.			Values.		
	Partially milked cows.	Beef cows.	Baby beef cows.	Partially milked cows.	Beef cows.	Baby beef cows.
WINTERING OR FATTENING A WEANLING CALF: ³						
Number of calves under study.....	1,015	7,236	4,009	-----	-----	-----
Feed:						
Hay.....pounds..	1,080	1,218	1,150	\$5.40	\$6.09	\$5.75
Silage.....do....	218	266	658	.44	.53	1.32
Protein meal.....do....	12	7	141	.21	.12	2.47
Straw.....do....	114	110	40	.11	.11	.04
Fodder.....do....	204	159	-----	.20	.16	-----
Corn.....bushels..	6.1	8.6	41.0	3.05	4.30	20.50
Corn stalks.....acres..	.1	.1	.03	.10	.10	.03
Pasture.....days..	10.0	9.0	48.0	.50	.45	2.40
Feed cost.....	-----	-----	-----	10.01	11.86	32.51
Labor:						
Man hours.....	12.5	8.6	12.2	2.50	1.72	2.44
Horse hours.....	4.7	6.8	9.1	.47	.68	.91
Other expenses...per cent of gross cost..	14	15	12.5	2.11	2.52	5.13
Gross wintering or fattening cost.....	-----	-----	-----	15.09	16.78	40.99
Deductions for by-products:						
Manure.....loads..	1.0	1.5	1.5	1.00	1.50	1.50
Pork.....pounds..	-----	-----	38	-----	-----	2.85
Total deductions.....	-----	-----	-----	1.00	1.50	4.35
Net wintering or fattening cost.....	-----	-----	-----	14.09	15.28	36.64
Cost at weaning time.....	-----	-----	-----	27.75	38.73	40.07
Total production cost, 12 to 15 months..	-----	-----	-----	41.84	54.01	76.71

³ The calves wintered averaged 12 to 14 months of age. The calves fattened as baby beef averaged 14 to 15 months of age and 825 pounds in weight when marketed.

Beef Cattle Fattening Costs.

Beginning with the winter feeding season 1918-19, the United States Department of Agriculture and five State experiment stations of the Corn Belt began a five-year study of beef cattle feeding costs. Five general cattle feeding areas, one in each of five Corn Belt States, were selected, namely, eastern Nebraska, west-central Iowa, north-central Illinois, east-central Indiana, and central Missouri. In each of these areas beef cattle feeding cost figures were kept on approximately 100 droves of cattle each year since the first winter, 1918-19.

During the first two winters, when corn was about \$1.50 per bushel, feed made up from 80 to 85 per cent of all feed-lot costs, man and horse labor 4 to 9 per cent, and all other expenses 9 to 14 per cent. During the third winter, 1920-21, when corn was charged to the cattle at about 50 cents a bushel, feed made up from 68 to 76 per cent of all fattening costs, with labor 7 to 11 per cent and the other expenses 17 to 24 per cent.

Table 8 shows that thin cattle going into the feed lot in the fall of 1920 cost very nearly as much as those bought during the previous years of high corn prices. The net cost of 100 pounds gain, however, was about half in 1920-21 what it had been the two preceding years. In the winter of 1918-19 and of 1919-20, when corn was around \$1.50 a bushel, the value of manure and pork paid for all costs other than the feed bill, provided the cattle were not on pasture too long. In the winter of 1920-21, under 50-cent corn prices, manure and pork values paid for only approximately half the feed-lot expenses other than the feed itself. It is a noticeable fact that in the last winter, when feed costs had fallen about half, the other expenses increased in most States.

Variation in the Cost of Fattening Cattle.

As there are wide differences between farms in the kind of rations used and methods of feeding, as well as in the grade of feeder cattle bought for feeding and in the skill of the farmer as a cattle feeder, there are wide variations in the net cost of different droves of corn-fed cattle by the time they

reach the stockyards. This difference was greatest during the winters of 1918-19 and 1919-20, when the farm price of corn was about \$1.50 a bushel and the prices of other feeds correspondingly high, as Figure 42 shows.

In the 1920-21 winter, when corn fed to the cattle covered in this study averaged 52 cents a bushel, there were not such wide differences in costs from one drove to another. The average cost per 100 pounds live weight of finished cattle covered in this study in the winter of 1918-19 was \$14.69; in 1919-20 was \$14.04; and in 1920-21 was \$10.19.

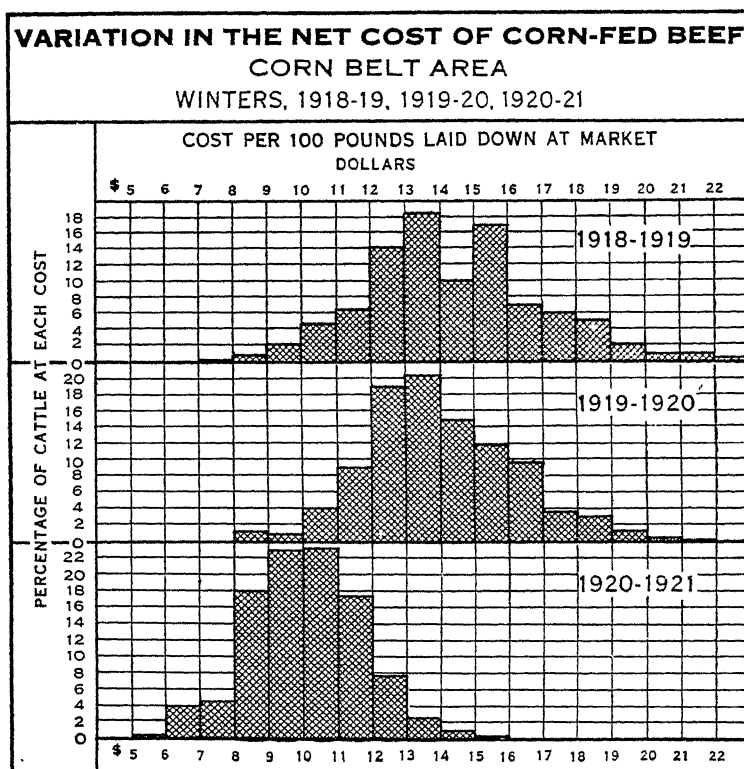


FIG. 42.—There is great variation in the cost per hundred pounds of producing fat cattle on different farms and in different years, especially since the war, when prices of feed and labor have been changing rapidly. In the winter of 1918-19 the cost varied from \$7 to \$23, but 57 per cent cost between \$12 and \$16 per hundred pounds. In 1919-20 the variation was from \$8 to \$22, but 65 per cent cost between \$12 and \$16. In 1920-21 the cost varied from \$5 to \$16, and 81 per cent cost between \$8 and \$12. The cost of production survey included about 55,000 cattle.

TABLE 8.—*Costs of fattening cattle in the Corn Belt.*

[Average of cattle of all ages.]

Season and State.	Days on farm.	Average gain (pounds).	Daily gain (pounds).	Net cost of 100 pounds gain.	Initial cost.	Feed.	Labor.	Other expenses.	Gross cost at market.	Manure and pork.	Net cost at market.	Sales weight (pounds).
Winter of 1918-19:												
Nebraska.....	176	295	1.68	\$26.48	\$70.40	\$79.69	\$7.01	\$9.24	\$166.34	\$17.83	\$148.51	1,010
Iowa.....	155	272	1.75	29.10	75.28	83.19	4.62	9.25	172.34	17.92	154.42	1,017
Illinois.....	186	295	1.59	23.28	81.68	84.57	9.19	11.97	187.41	22.31	165.10	1,084
Indiana.....	183	344	1.88	22.40	76.29	75.52	5.94	12.80	170.55	17.21	153.34	1,024
Missouri.....	161	268	1.66	23.59	71.38	56.91	4.89	8.45	141.63	7.02	134.61	997
Winter of 1919-20:												
Nebraska.....	156	270	1.73	23.99	80.49	66.84	3.80	8.97	160.10	14.84	145.26	1,067
Iowa.....	184	326	1.80	23.28	77.10	82.30	4.13	10.72	174.25	21.27	152.98	1,112
Illinois.....	170	247	1.45	33.22	77.52	84.10	6.68	10.44	178.74	19.16	159.58	1,068
Indiana.....	183	290	1.58	25.26	79.94	76.09	5.99	12.37	174.39	21.20	153.19	1,074
Missouri.....	196	262	1.34	26.22	77.26	65.71	4.67	8.51	156.15	10.20	145.95	1,069
Winter of 1920-21:												
Nebraska.....	166	309	1.86	13.94	78.68	34.17	4.29	12.05	129.19	7.44	121.75	1,182
Iowa.....	194	353	1.83	12.34	74.67	36.89	3.81	11.99	127.36	9.14	118.22	1,194
Illinois.....	174	258	1.48	18.08	66.49	38.17	5.73	10.63	121.02	7.89	113.13	1,101
Indiana.....	166	270	1.63	15.44	70.09	35.30	5.22	11.25	121.86	10.08	111.78	1,099
Missouri.....	252	343	1.40	16.11	67.81	48.06	4.64	10.53	131.04	7.97	123.07	1,186

The details of the feed-lot costs are given in Appendix. Page 836, Table 486.

TABLE 9.—*The normal costs of fattening a 2-year-old steer in the Corn Belt, with the farm price of corn at given levels.*

Farm price of corn.	Feed.	Man labor	Expenses other than feed and man labor.	Gross fattening cost.	Deductions for pork and manure.	Net cost.	Average gain (pounds).
\$0.50.....	\$36.05 (74.0%)	\$2.22 (4.6%)	\$10.46 (21.4%)	\$48.73 (100%)	\$8.68	\$40.05	315
\$0.75.....	\$47.45 (77.0%)	\$2.91 (4.7%)	\$11.26 (18.3%)	\$61.62 (100%)	11.23	50.39	305
\$1.00.....	\$58.85 (79.0%)	\$3.60 (4.8%)	\$12.05 (16.2%)	\$74.50 (100%)	13.78	60.72	295
\$1.25.....	\$70.25 (80.4%)	\$4.28 (4.9%)	\$12.85 (14.7%)	\$87.38 (100%)	16.35	71.03	285
\$1.50.....	\$81.65 (81.4%)	\$4.97 (5.0%)	\$13.66 (13.6%)	\$100.28 (100%)	18.91	81.37	275

Costs at Different Corn-Price Levels.

Table 9 shows the normal cost of fattening a steer in the Corn Belt when the farm price per bushel of corn is at any one of the five prices given. Due consideration was taken of the fact that the freight and labor costs during the winter of 1920-21 were not in line with 50-cent corn, and adjustments were made to pre-war freight and wages.

Feed represents a somewhat higher per cent of the gross cost with high-priced corn than it does with the 50-cent corn. The value of pork and manure produced behind cattle amounts to as much as all expenses other than feed with \$1.50 corn, while with 50-cent corn the value of pork and manure amounts in normal times to about two-thirds of the expenses other than feed. It will be noted that this table bears out the rule that starting with 50-cent corn the net cost of fattening a steer advances half as fast as the price of corn; that is, when the price of corn doubles from 50 cents to \$1 a bushel, the net cost of fattening a steer increases one-half over what it cost at the 50-cent corn level.

Price Returned for Corn by Winter-Fed Cattle.

Cattle charged with the cash farm prices for corn and other feeds were not always able to return a profit to their owners. There were many cattle, especially in the winters of 1918-19 and 1919-20, that were able, however, to return market prices for all their feed other than corn and, in addition, returned enough to pay the cost of growing this corn. When taking the average per head sales price of each drove of cattle covered in this study, and subtracting from this amount of money all the costs going into making that steer, excepting the cost of corn, the balance of money left has been called the returns that the steer made for corn. Not all cattle under study fed during the three winters showed a profit balance even when corn was not charged to them. In making Figure 43, the money that some steers showed as a loss balance divided by the bushels of corn eaten gives as a result a figure which has been called the loss per bushel of corn eaten.

It is noticeable that in the winter of 1920-21 very few cattle were able to return more than \$1 per bushel for corn fed,

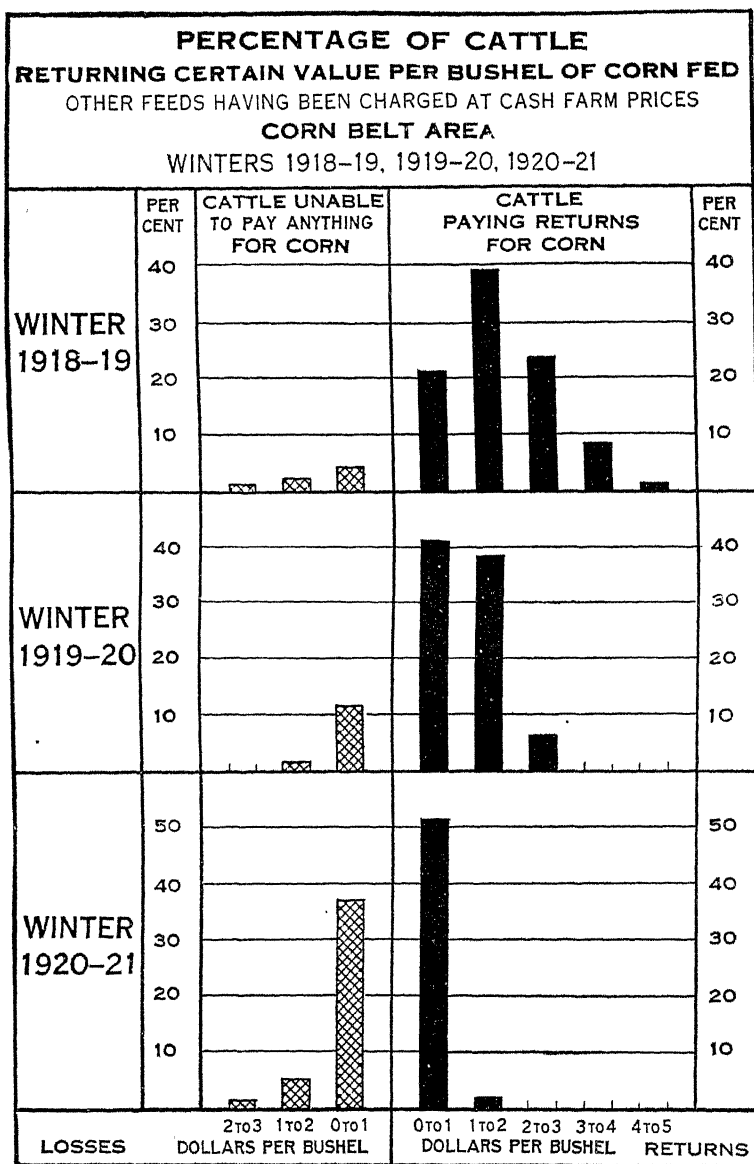


FIG. 43.—There is a considerable number of steers which do not pay for the corn fed to them, when other feeds are charged at cash farm prices. The cross-hatched columns represent the percentage of the steers each winter which lost from 1 cent to \$2 per bushel of corn they were fed, while the black columns represent the steers paying from 1 cent to \$5 for the corn. In the winter of 1920-21 almost one-half the steers paid nothing for the corn fed to them, if other feeds are charged at cash farm prices. (See

while on the other hand many cattle were unable to return anything to their owners for their corn after paying market prices for all other feed (see Fig. 43).

Averaging together the cattle under study in all five Corn Belt States, the amount realized per bushel of corn fed to them, after they had paid all other feed-lot expenses, was \$1.29 in the winter of 1918-19, \$0.80 in the winter of 1919-20, and \$0.01 in the winter of 1920-21.

Importance of Credit for Beef Production.

The financial needs of beef-cattle producers can be separated roughly into two classes. First, cattlemen who breed and raise cattle, either to fatten or to sell as stockers and feeders, need loans maturing in not less than one to three years. This is called "middle term" credit. Secondly, men who purchase and fatten feeder cattle need "short term" credit for three to six months.

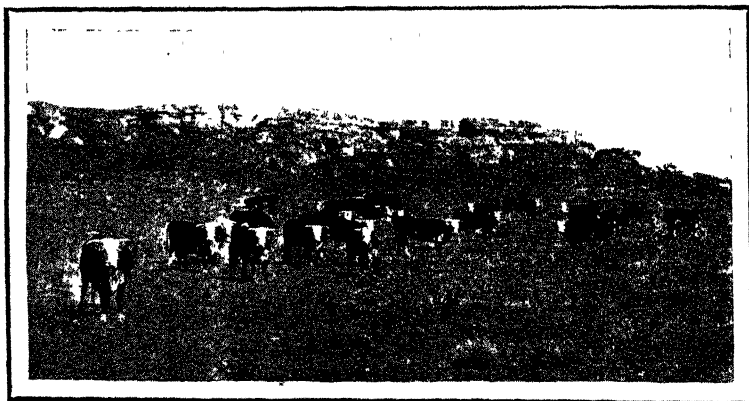
At present the chief agencies for credit are the local banks and cattle-loan companies. Banking laws frequently limit the size and duration of loans to such an extent that the banks can not satisfactorily meet the credit demands of cattlemen. Cattle-loan companies are found in practically all important live-stock markets. Ordinarily it is very difficult to obtain satisfactory loans on cattle for one to three years, as these agencies desire to make loans for a period not to exceed six months, which, of course, is ample for feeding purposes. When one needs credit for a longer period for developing young cattle for market the privilege of renewal is frequently granted. In some cases the loans are made without any security other than a promissory note from the borrower, but more commonly the borrower is required to give a mortgage on his live stock or land.

The use of credit or financial statements has become quite common in connection with cattle loans. As a rule an examiner inspects the herd occasionally to see that the value of the security pledged for the loan is protected. When the borrower is a reliable man and a good feeder, and the market is steady, the banks may grant credit up to 100 per cent of the value of the herd, because live stock usually becomes much more valuable with time due to growth and finish. The aver-

age, however, is nearer 75 per cent. Some loans are made for only 50 per cent of the market value.

In order to be eligible for rediscount at Federal reserve banks cattle paper must have a maturity not to exceed six months and must be presented by a member bank. The proceeds of these notes must also have been used for agricultural purposes. Cattle-loan companies, however, usually desire to find a buyer for their notes and mortgages. If they are for small amounts they are usually sold as such direct to investors. Companies who make large loans, however, find it easier to dispose of these notes by retaining them as security for notes or bonds issued by the company in popular denominations.

The activities of the Stock Growers' Finance Corporation and the War Finance Corporation during the summer and fall of 1921 and the winter of 1922 have helped to establish easier and longer credit for cattlemen. Their needs could be met much more adequately by slight amendments to the Federal Reserve and Federal Farm Loan acts.



Marketing Beef Cattle.

The market is the goal of the producer. The cattleman therefore is greatly concerned in knowing what the consumer wants in the way of beef or veal, when it is wanted, where it must be delivered, and what price it will probably command.

Cattle marketing has undergone many important changes since the country was first founded. In the early colonial days the family circle comprised both producer and consumer, and consequently there were neither marketing nor marketing problems. Specialization in production soon resulted in surpluses which had to be disposed of outside the family circle. Then marketing began with all its attending difficulties and problems.

Boston was probably the first centralized live-stock market in the country, records indicating that as early as 1638 cattle were driven from New Hampshire to Boston to be marketed.

The Dutch, at New Amsterdam, which is now New York City, the Quakers at Philadelphia, and the English Catholics at Baltimore each established cattle markets at an early date. It is noteworthy that all of these early markets have functioned continuously down to the present time, despite the westward movement of the beef-cattle industry.

With the development of the Corn Belt and the opening of the Western Range regions live-stock markets were established at various points on the Great Lakes and along the Mississippi and Missouri Rivers. Thereafter most of the western cattle went to these newer and nearer markets instead of to the Atlantic seaboard. Beef was packed in Chicago as early as 1832, but the first stockyards were not established until 1848. In 1865 the Chicago Union Stock Yards were opened, five smaller stockyards located in different parts of the city having been combined to form the new organization.

During the last half of the nineteenth century markets were opened at Kansas City, St. Louis, Louisville, Omaha, Denver, Sioux City, St. Paul, St. Joseph, and Wichita. During the next 10 years Fort Worth, Oklahoma City, and Portland, Oreg., markets were established, while more recently the list has been increased by the opening of markets at Salt Lake City, Seattle, Nebraska City, Sioux Falls,

Atlanta, Dallas, Montgomery, El Paso, Jacksonville, and elsewhere, until at the present time there are some 67 well-established, centralized live-stock markets doing business.

The volume of business passing through these central markets annually is enormous. Complete receipts data are available only as far back as 1915, when the United States Department of Agriculture began compiling such information. During the seven years 1915 to 1921, inclusive, a total of 147,787,991 cattle and calves passed through public stockyards. In 1918 total receipts of cattle and calves at central markets amounted to 25,295,000 head, which is probably the greatest number to be so marketed during a single year in the history of the country.

Modern Methods of Marketing Beef Cattle.

Many methods are used by the producer in marketing beef cattle, but most of them may be grouped under six or seven general heads. The principal systems, listed in the probable order of their relative importance, are as follows:

(a) Selling to country drover for shipment to central markets.

(b) Shipping to central markets through cooperative associations.

(c) Shipping to central markets direct.

(d) Direct marketing to local butchers.

(e) Selling direct: (1) Selling direct to packer-buyer, or speculator in the country. (2) Shipping direct to the packing house.

(f) Slaughtering on farms and selling as carcass meat.

(g) Special forms of marketing, such as (1) auction sales, (2) selling on the range to cooperative purchasers, etc.; (3) selling on mail orders.

From one-half to three-fourths of the beef cattle marketed in the United States pass through central markets. In 1916 central markets received more than 71 per cent of the beef cattle marketed, and in 1917, 76 per cent. Since then there has been a slow but steady decrease in the percentage of cattle disposed of through public stockyards. In 1918 about 75 per cent, in 1919, 74 per cent, and in 1920, 70 per cent passed through public stockyards, whereas in 1921 the apparent proportion so marketed dropped to 67 per cent.

One of the earliest methods of disposing of cattle was through sales to the country drover, and although during the past few years the business of the drover has been seriously curtailed because of the development of newer methods of marketing, it seems probable that a greater per cent of cattle and calves still pass through the hands of the country drover than are marketed in any other way. Formerly the drover had a tremendous advantage in his dealings with most farmers due to his superior knowledge of general market conditions. Recently, however, the extension of such facilities as the telephone, rural free delivery of mail, wireless telegraph and telephone has placed the farmer on a more nearly equal footing with the drover.

Next to the country drover, cooperative shipping is probably the most important present-day method of marketing beef cattle. In 1920 approximately one-fourth of Iowa's live stock was marketed cooperatively. During the same year Wisconsin had about 500 cooperative live-stock shipping associations, which handled approximately 65 per cent of the live stock marketed by that State.

Shipping to central markets by producers has always been the favorite method of large-scale producers. The range cattleman or the Corn Belt feeder who has anywhere from a few carloads to several trainloads of cattle to market at one time usually prefers to take his own stock to market rather than patronize either the country drover or the cooperative shipping association.

The local butcher has always provided an important outlet for cattle. His nearness to the producer gives him certain advantages, but during recent years this advantage has been somewhat neutralized by the economy of large-scale slaughtering and the extension by the big packers of the peddler car system.

Selling direct to a speculator or packer buyer in the country and shipping direct to the packing house appeals to some producers on account of the elimination of stockyard charges. The chief objection to these methods is that it relieves the producer of a certain amount of responsibility, and thereby contributes to his position of comparative isolation and discourages careful study of market and trade conditions.

In 1919, 1,904,581 cattle and calves were slaughtered on farms, while 224,780,189 pounds of beef and veal were sold from farms during the same year. Auction sales, selling on mail order, and selling on the range to cooperative purchasers, are comparatively new ways of disposing of cattle and have not, as yet, become important.

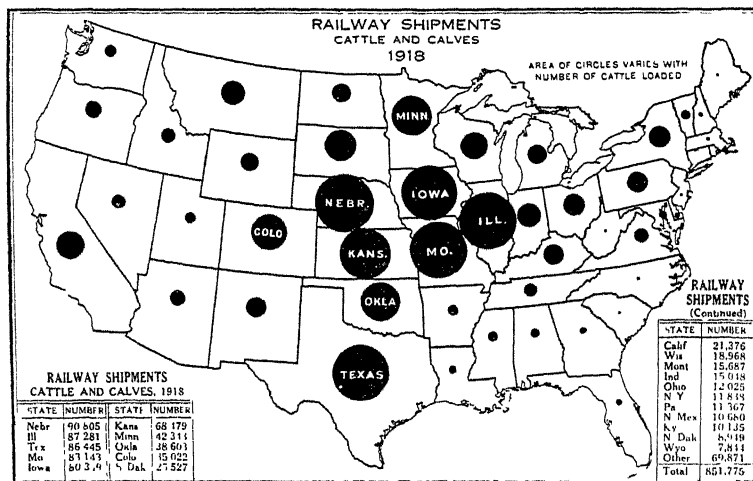


Fig. 44.—Statistics of railway loadings of cattle and calves are available only for the year 1918. Nebraska was the leading State in that year, with over 90,000 carloads. Illinois, Texas, Missouri, and Iowa each shipped nearly as many, Iowa shipping practically as many from country points as Nebraska. These five States furnished more than half of all cattle and calves shipped in the United States during that year. Market as well as country loadings are included. The cattle were shipped mostly to the big markets and packing centers located in the same group of States. (See Figs. 45, 53, and 54.)

Cattle Markets.

The flow of cattle and calves through central markets is made up of many smaller streams, every State contributing its quota. These contributions vary greatly in size. A survey for the year 1918 (Fig. 44) indicated that during that year Nebraska was first, with 90,805 carloads; Illinois second, with 87,281; Texas third, with 86,445; Missouri fourth, with 83,143; and Iowa fifth, with 80,339. These five States loaded and shipped more than 50 per cent of the cattle and calves loaded in the entire country that year. A very large per cent of these cattle eventually reach one or another of the half dozen leading markets situated in the Corn Belt.

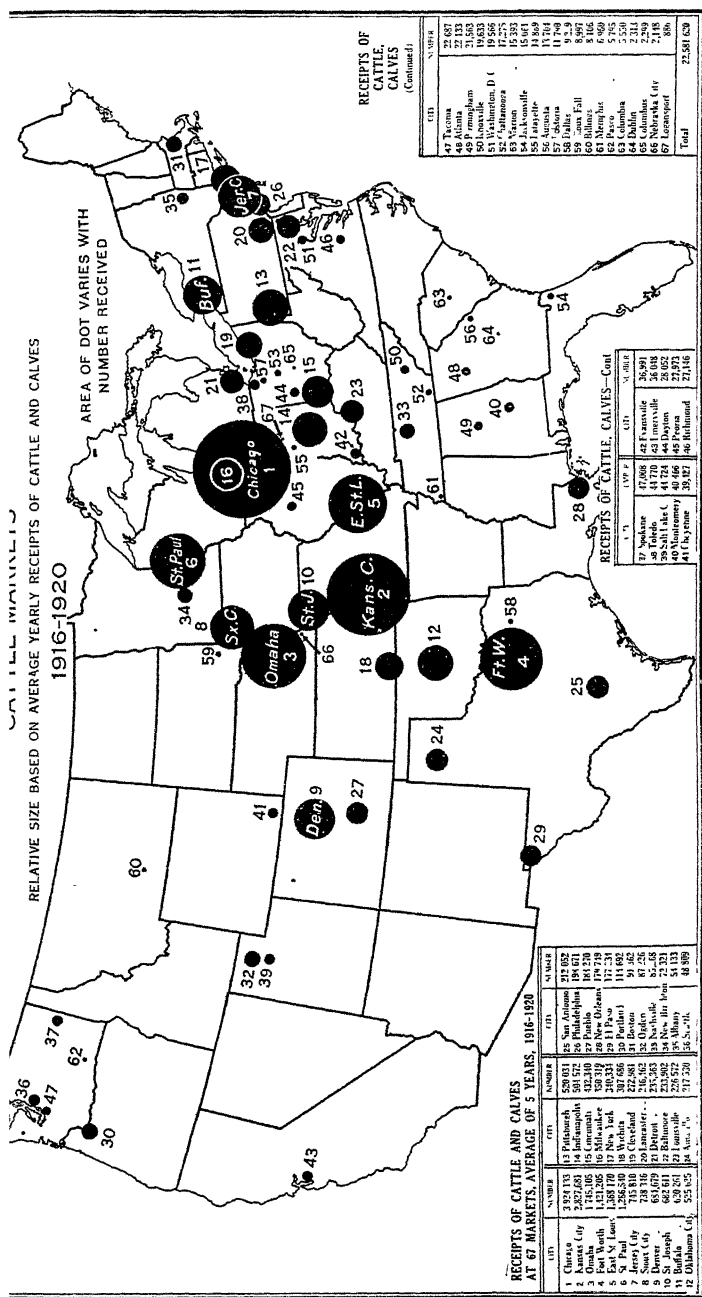


FIG. 45.—Over 55 per cent of the receipts of cattle and calves in the United States during the years 1916 to 1920 were at points in the Corn Belt. Other important yards are located at Fort Worth, St. Paul, Jersey City, Denver, Buffalo, Oklahoma City, Pittsburgh, and Indianapolis. The annual receipts at Chicago have been greater than any other market since the founding of the present yards in 1865. Kansas City ranks second and Omaha third. Most of the cattle received at these yards are sold to packers for slaughter, but large numbers are also sold to farmers for stockers and feeders. (See Figs. 47, 53, and 54.)



Choice Feeder Steer.



Good Feeder Steer.

FIG. 46.—Feeder cattle are those which give evidence of ability to put on additional flesh and fat. The grade of such animals is determined by the relative ability to do this quickly, economically, and on those parts which comprise the more desirable and therefore higher priced cuts of meat. Four grades of feeder steers—choice, good, medium, and common—are illus-



Medium Feeder Steer.



Common Feeder Steer.

trailed. Note the differences in conformation and finish. The choice feeder has a straight, broad back, good depth of barrel, loin, and flank, a full round, short neck and legs, and a broad muzzle. The lower grades are more or less deficient in one or more of these important characteristics. Compare with Figure 66.

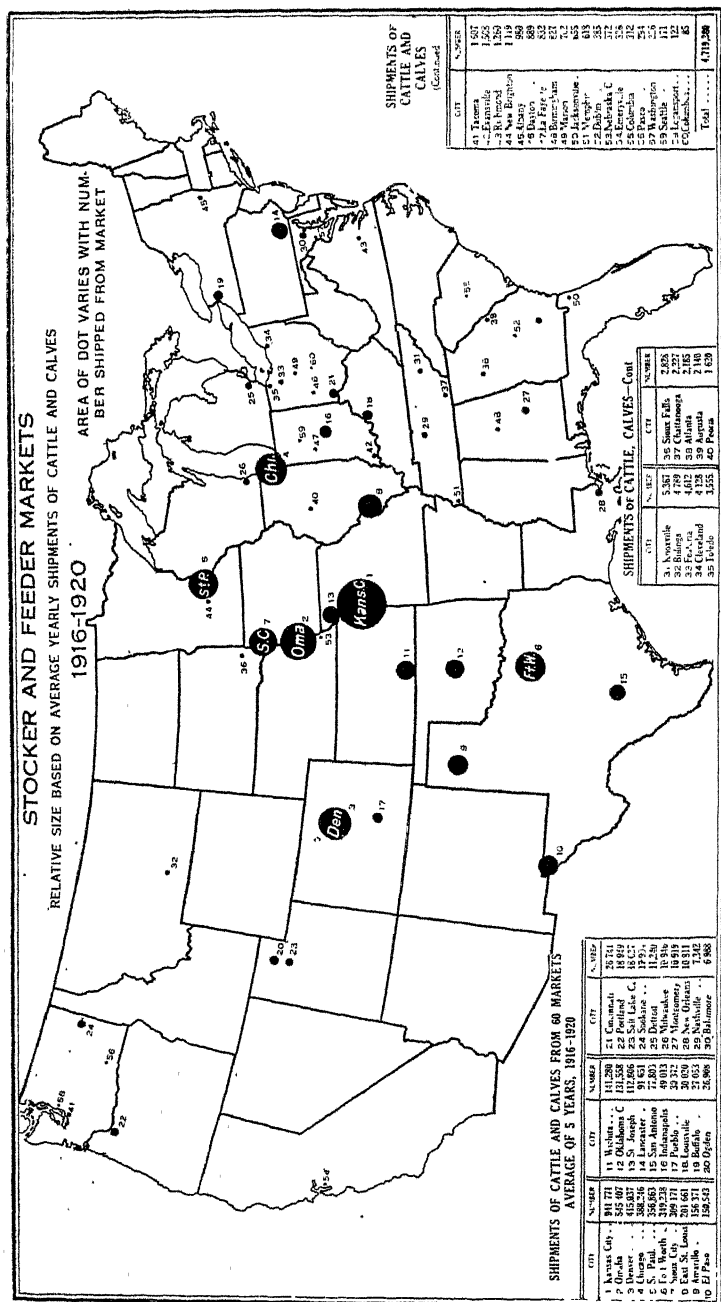


FIG. 47. Kansas City leads all markets in the country in number of stocker and feeder cattle and calves handled. Omaha ranks second, Denver third, and Chicago fourth. St. Paul, Sioux City, and Fort Worth are other important markets. Most of these large stocker and feeder markets lie along the margin between the grazing lands of the West, where the stockers and feeders are produced, and the Corn Belt and other feeding areas to the east. The four large Missouri River markets (Kansas City, St. Joseph, Omaha, and Sioux City) handle over 40 per cent of the number shipped from the 67 public markets. The dots on this map correspond in size with those of Figure 45.

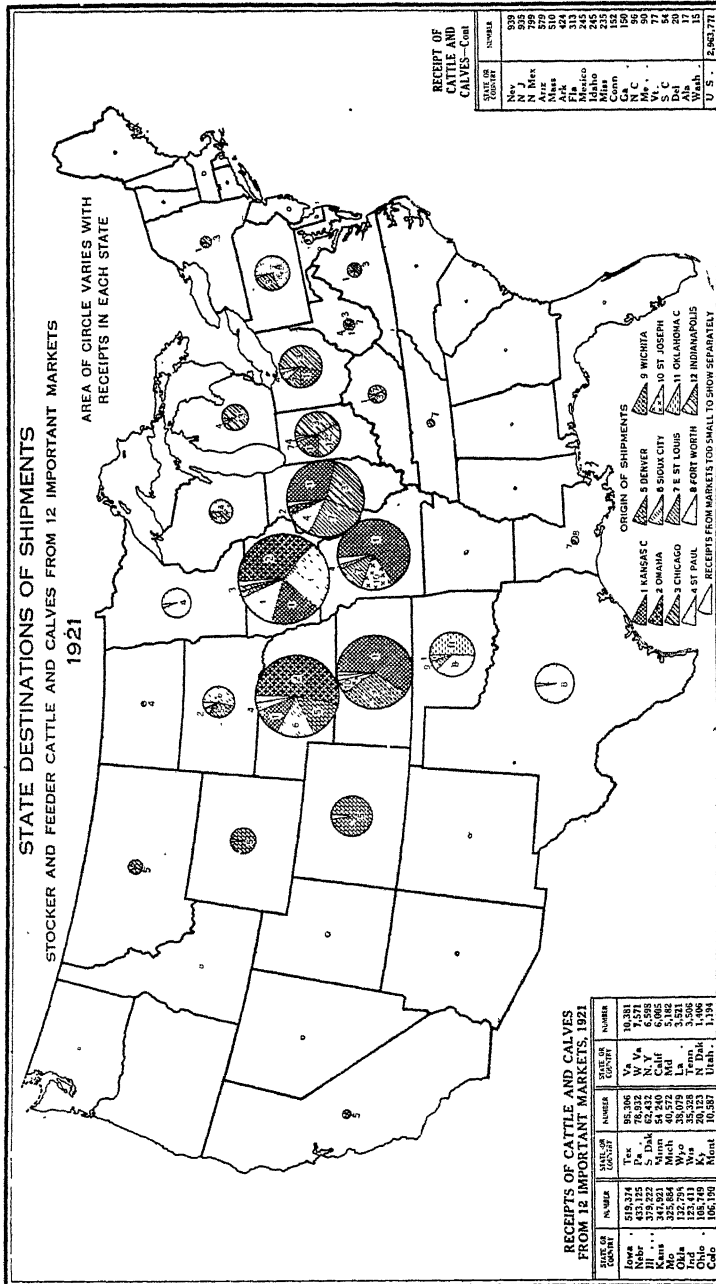


FIG. 48.—Iowa received during 1921 more stocker and feeder cattle and calves from the 12 important markets than any other State. Nebraska ranked second in number received, Illinois third, Kansas fourth, and Missouri fifth. These five Corn Belt States received over two-thirds of the shipments of stockers and feeders from these 12 markets. It is noteworthy that stockers and feeders were shipped from Denver as far west as California. (Compare with Fig. 47 opposite.)

Rating the central markets on the basis of their average annual receipts of cattle and calves during the five years 1916 to 1920 (Fig. 45), Chicago leads, with Kansas City second, and Omaha third. It is interesting to note that despite the establishment of important live-stock markets near the center of the Corn Belt and considerably nearer the great cattle-producing areas of the West, Chicago has been able to hold first place in receipts every year since 1865.

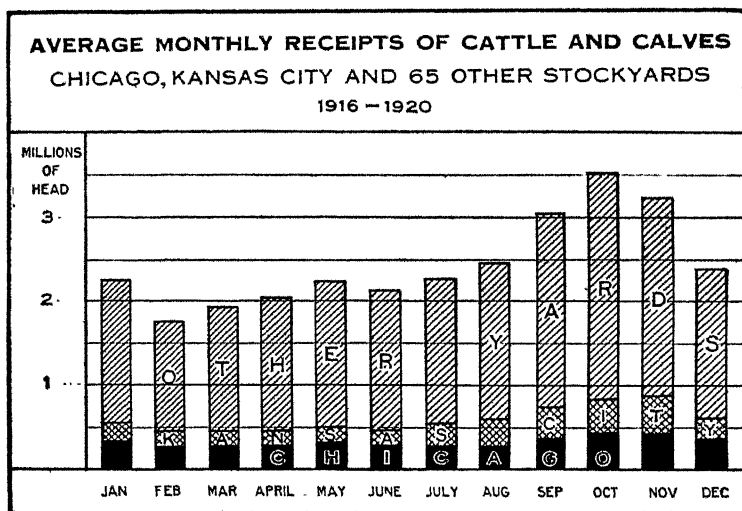


FIG. 49.—Seasonal conditions regulate the movement of cattle to market. The heavy movement from the western ranges starts in July or August, reaches its crest in October, after the grazing season is over, and ends in December. The movement from the Corn Belt, although continuing throughout the year, does not assume large proportions until spring, reaching its crest in May. A considerable number of cattle are received in the spring also from the Southwestern States. (For location of the markets see Fig. 45.)

Not all cattle marketed are converted immediately into beef. About 20 per cent of all cattle and calves received at the 67 markets during the five years 1916 to 1920, inclusive, were returned to the country for further feeding. As shown in Figure 47, Kansas City ranked first as a stocker and feeder market, with an average annual movement of approximately 942,000 head. Omaha was second with 545,000, and Denver third with 415,000. Chicago, which in all previous classifications had occupied first place, dropped to fourth with

respect to stockers and feeders handled, with average annual shipments of 388,000 head.

During 1921, 12 markets handled 84.6 per cent of all stockers and feeders passing through public stockyards (see Fig. 47). During the preceding year the same markets handled 82 per cent. The State destinations of stockers and feeders passing through these markets provides a basis for determining the sections in which most of the cattle finishing is done. In 1921 Iowa received from the 12 markets referred to, a total of 519,374 stocker and feeder cattle and calves, and

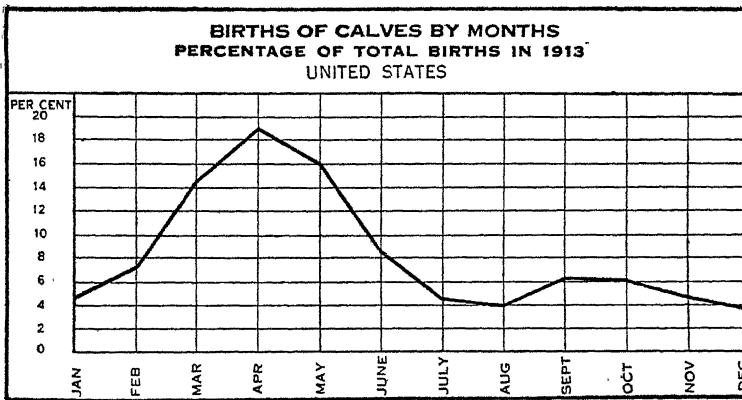


FIG. 50.—Half of the calves are born in the three spring months, the peak being reached in April. A small increase in number of births occurs again in the fall, during which months about 17 per cent are born. The slaughter of calves shows a similar curve, but the crests occur a month later. (See Fig. 51.)

led all States in that regard. Nebraska was second with 433,125, Illinois third, Kansas fourth, and Missouri fifth. These are all Corn Belt States. (Fig. 48.)

Seasonal Movements of Cattle.

An important characteristic of the movement of cattle through public stockyards is the seasonal variations. Both range and pasture cattle are marketed when the pasture season ends, while the bulk of the cattle from the Corn Belt go to market from three to four months after they are put on feed. Since probably 75 per cent of the cattle marketed are grass cattle it is obvious that their movement represents the peak for the year.

A tabulation of cattle and calf receipts at all public markets for five years (Fig. 49) shows that October is, on the average, the month of heaviest marketing, November second, and September usually third. As a rule February is the lightest month, partly due to the fact that it is the shortest month but more particularly because it comes between seasons. By that time the grass-fed cattle have all been marketed and only a few of the grain-fed cattle are ready for market. For the five years studied the October

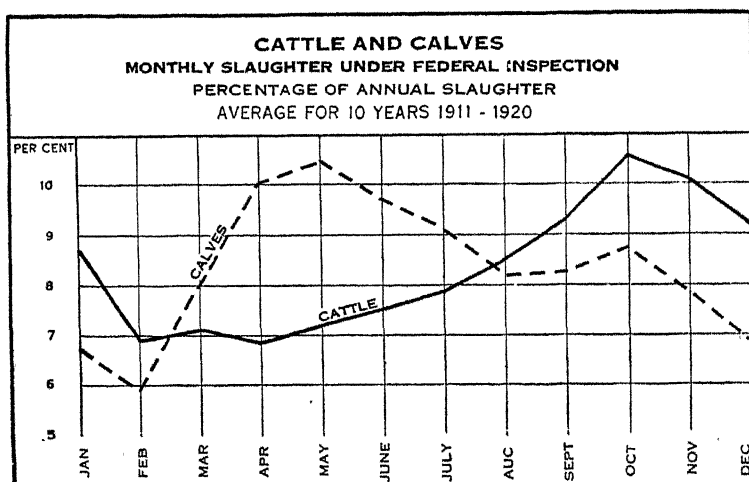


FIG. 51.—The heaviest calf slaughter is in late spring, a few weeks after birth, while the heaviest slaughter of cattle is in the fall, at the end of the summer grazing season, grass being the cheapest feed for making beef. The scale of the graph is not carried down to zero, so that the seasonal slaughter is really more uniform than it appears on the graph. Compare the calves curve with Figure 50, and the cattle curve with Figure 52.

average was 2,709,148 head, while that of February was 1,357,549, a variation of nearly 50 per cent. Normally over 40 per cent of the total number marketed during the year go to market during the last four months.

These seasonal surpluses usually react to the decided disadvantage of the producer in the form of dull trade and lower prices. For many years individuals and organizations have made serious efforts to devise ways of equalizing receipts at public markets. For one reason or another most of these have failed, the chief difficulty arising from the fact,

pointed out above, that such movements are controlled largely by weather and climatic conditions.

This same troublesome fact of unevenness in the movement of cattle and calves to market is shown by slaughter records (Fig. 51). Considering monthly average slaughter of cattle under Federal inspection for 10 years, October

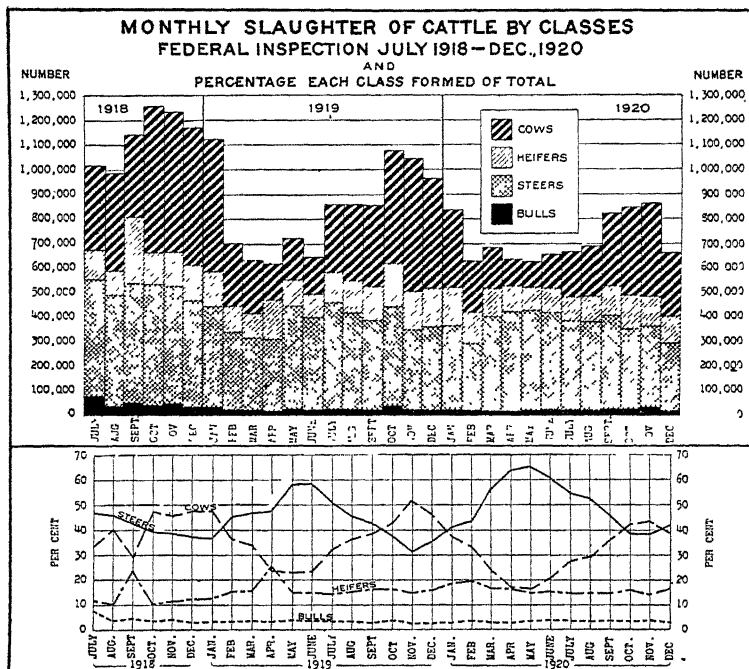


FIG. 52.—Much of the variation in monthly receipts of cattle at public markets is due to unevenness in the movement of cows to market at different seasons of the year. During this period of 30 months in which statistics were collected the number of cows slaughtered varied from about 20 per cent in the spring to nearly half of all cattle slaughtered during the late fall and early winter. The receipts of steers are relatively uniform throughout the year.

again stands out as the month of heaviest movement. During that month 11 per cent of the total slaughter for the year occurred. November was the next heaviest month and September third.

While this was true of cattle, calf slaughter followed a quite different course. As most calves are dropped in the

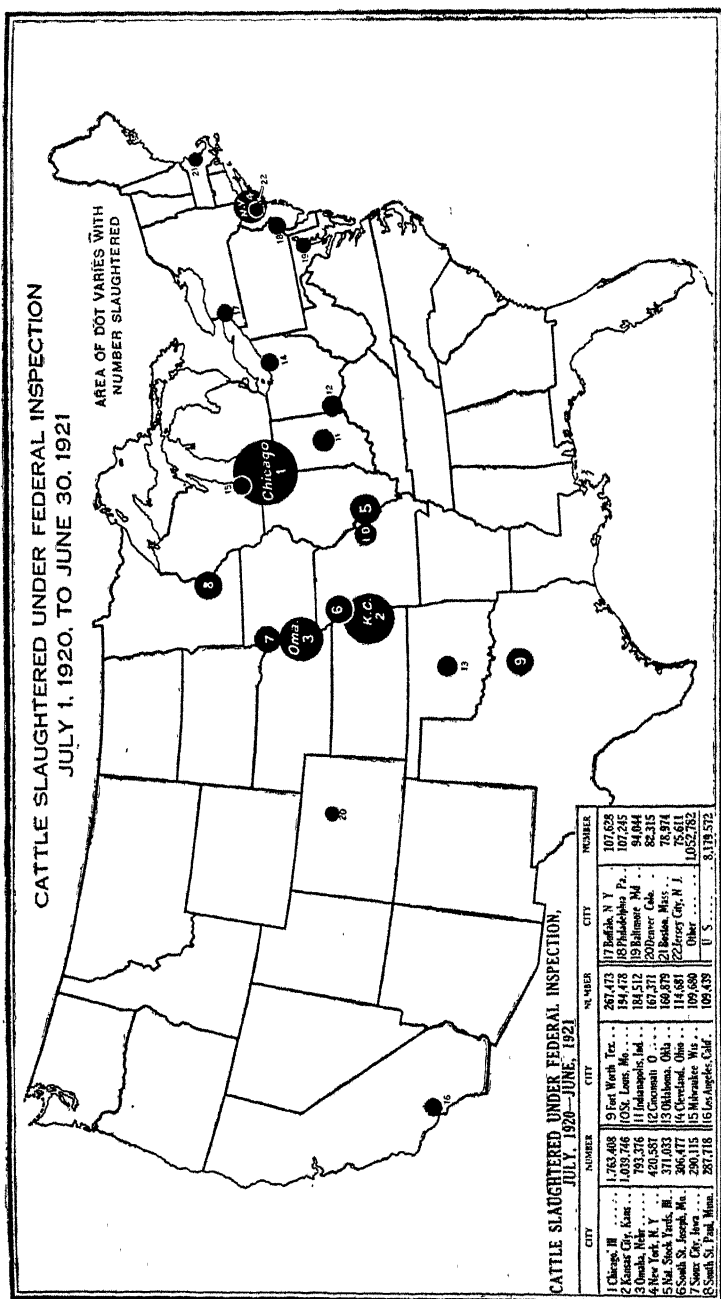


Fig. 53.—Two-thirds of the cattle slaughtered under Federal inspection are slaughtered in the Corn Belt—nearly half in Chicago, Kansas City, Omaha, St. Louis, and East St. Louis. (See Fig. 73.) The cattle slaughtered under Federal inspection constitute about two-thirds of the total annual slaughter in the United States, consequently one-third of the total slaughter is at these four points. Compare this map with Fig. 45 and note the relatively smaller slaughter than receipts at Denver, Fort Worth, and other southwestern points, the difference being due to the stockers and feeders handled at these markets. (See Fig. 47.)

spring, it is to be expected that the greater number should go to market during that season of the year (see Fig. 50). During the 10-year period 10 per cent of all calves were slaughtered during May. April, which was next in importance, averaged almost as many.

A few years ago a study of cattle slaughter was continued during a 30-months' period from July, 1918, to December, 1920, which included a segregation of animals slaughtered by classes (see Fig. 52). It showed that while, as a rule, supplies of each class of cattle are largest during the period

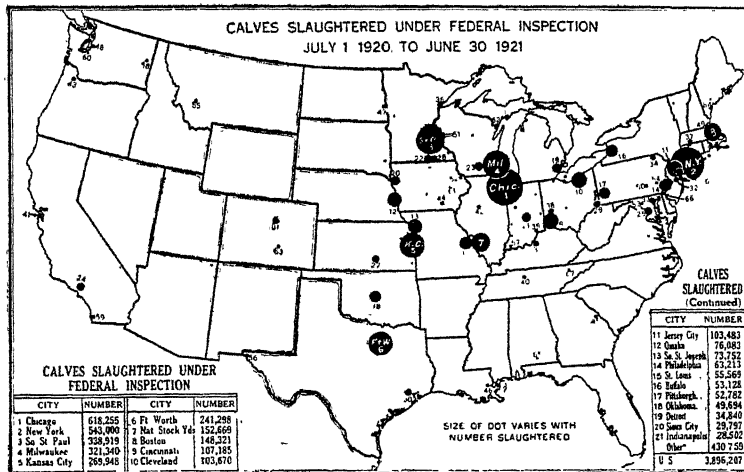


FIG. 54.—Compare this map with that of beef calves, Figure 22, and note the large slaughter at Boston, New York City, Cleveland, and Milwaukee, which are located in dairy rather than beef districts. Undoubtedly a large proportion of the slaughter at these and other northeastern points is of dairy calves. A dot on this map represents about the same number of animals as a dot of the same size in Figure 53, regardless of size of the maps.

when total supplies are heaviest, variations in the number of cows slaughtered at different seasons are wider than those of any other class of stock, and that irregularity in receipts of cows is largely responsible for the extreme variations in the number of cattle slaughtered. Considering the 30 months as a whole, while steer slaughter ranged from 36 per cent of all slaughter in November to 62 per cent in May, cows slaughtered ranged from 20 per cent in May to 47 per cent in November. In other words, the marketing of cows is much more uneven than that of steers.

The relative proportions of the two classes of cattle as they arrive at public stockyards, however, do not vary as widely as does the slaughter, for the reason that during the fall a considerable proportion of the steers are returned to the country as stockers and feeders. This seasonal glut of cows is a matter of considerable consequence to the cattleman.

Price a Factor in Cattle Marketing.

Price is the most important factor in marketing cattle. It attracts supplies and moves them from place to place. Neither distance, time, nor almost any other consideration is too great an obstacle to be overcome, provided the price is high enough to warrant the effort. Cattle are shipped not only the 2,000 miles from the Pacific coast to Corn Belt markets, but also later from Chicago to England, covering 1,000 miles by rail and 3,000 miles by water, simply because the price is sufficient to make the transaction profitable. While the general movement of cattle is from west to east, a shift in prices sometimes reverses the usual order of things, as in the winter of 1921, when considerable numbers of meat animals were shipped from middle western markets to the Pacific coast.

In the following discussion Chicago prices are used unless otherwise specified. This policy is followed primarily because Chicago is the base market of the country, and also because the flow of cattle to Chicago is probably more uniform as regards the various classes and grades than to any other market.

A study of monthly average prices of good beef cattle from 1901 to 1921 (Fig. 55) develops the fact that during the first seven years of this period the market was relatively steady, extreme fluctuations amounting to only \$2.70 per 100 pounds. Beginning with August, 1901, prices moved upward and continued in that direction for approximately a year. The peak was reached in July, 1902, the net advance for the year amounting to \$2 per 100 pounds. This advance was wholly lost during the next six months, and during the next five years the market was fairly steady, the average price of good beef cattle for that period being very close to \$5 per 100 pounds.

AVERAGE MONTHLY PRICE OF GOOD BEEF CATTLE

CHICAGO, 1901-1921

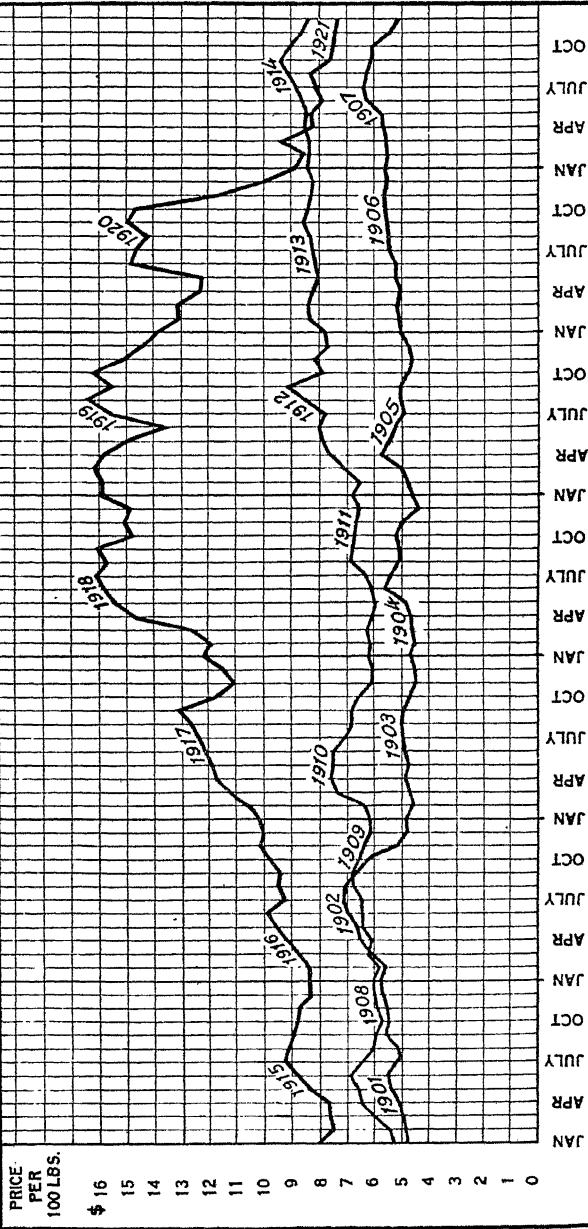


FIG. 55.—During the 21 years from 1901 to 1921, inclusive, September prices of good beef cattle averaged the highest in five of the years, July and August each in four years, June in three years, April in two years, November and December each in one year. Prices during the years 1901 to 1911 ranged usually between \$5 and \$7 per hundred pounds, then rose during the years 1912-1915 to between \$8 and \$9. By July, 1918, the price had doubled and remained around \$16 for over a year. Early in November, 1920, the market broke sharply, dropping \$6 per hundred in less than three months, and by December, 1921, the average price had fallen to about \$7.40, which was below the prewar level.

In 1908 prices advanced about \$1 per 100 pounds, and up to 1912 the average ranged from \$6 to \$7 per 100 pounds. In 1912 the market advanced about \$2, but before the end of the year lost about half of the advance. During the next two years prices were again fairly steady, but in 1915 a strong upward movement began which, with several sharp recessions, continued until August, 1919. During that month the market reached the highest point touched during the 21 years under discussion. The average price of good beef steers in

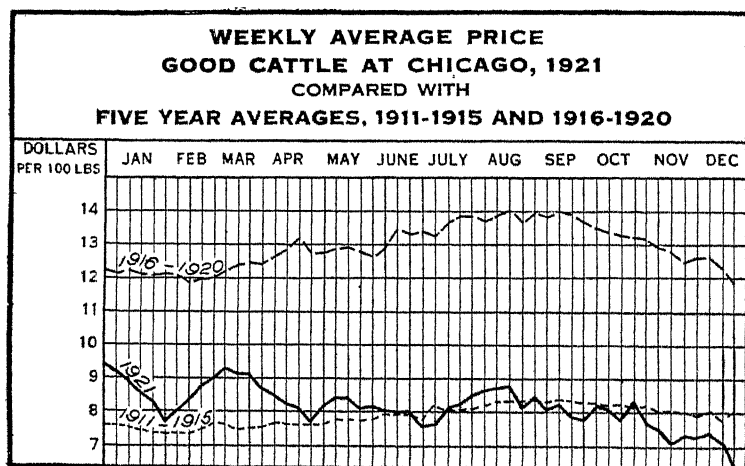


FIG. 56.—The seasonal trend of cattle prices in 1921 was abnormal. Beginning at about \$9.40 per hundred pounds the first week in January, the average price of good beef cattle remained between \$8 and \$9 during most of the summer and declined to \$6.40 the last week in December. The normal seasonal trend, as shown by the averages for the periods 1911-1915 and 1916-1921, is a gradual rise in price through the spring and summer months, followed by a corresponding descent during the late autumn and winter.

that month was \$16.45, which was \$12.05 above the low point of \$4.40 in December, 1904, or an increase of nearly 274 per cent.

Between October, 1919, and May, 1920, a bad break occurred, the net decline for the eight months period amounting to approximately \$4 per 100 pounds. There was a quick recovery during the next month, however, which carried the market up nearly \$3. In September, 1920, liquidation began in earnest; and with only slight recoveries intervening, the market continued downward to the end of 1921. During that 16 months period monthly average prices broke from

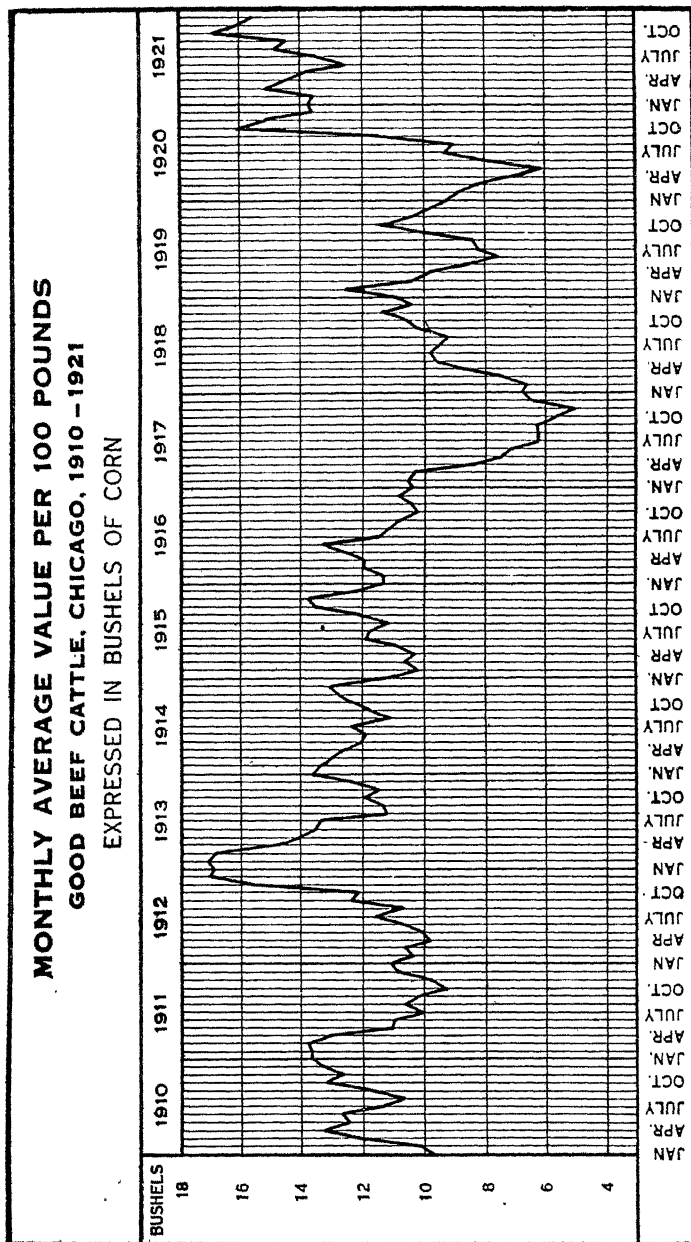


FIG. 57.—The ratio between cattle and corn prices during the 12 years from 1910 to 1921, inclusive, was highest in February, 1913, when the value of good beef steers at Chicago per 100 pounds equaled that of 17.2 bushels of corn. The ratio was lowest in November, 1917, when 100 pounds of live cattle had a value equal to 5 bushels of corn. In general, 10 to 14 bushels of corn have a value equal to 100 pounds of cattle. In 1921 corn was cheap compared with cattle, 100 pounds of cattle equalling about 15 bushels of corn. Note that the scale of the graph has not been carried down to zero.

\$14.95 to \$7.31, a decline of \$7.64, or more than 50 per cent. The decline in weekly average prices amounted to \$9.15 per 100 pounds, or nearly 59 per cent.

Prices at public markets show seasonal fluctuations, just as receipts do. While general price levels vary from year to year, the upward and downward swings occur, on the average, at about the same season of the year. There is, of course, a rather close correlation between these price swings and variations in available supplies. Using weekly average prices for two five-year periods, 1911-1915 and 1916-1921 (Fig. 56), it is found that good beef-cattle prices are usually highest in August and September and lowest in December, January, or February.

Cattle Prices Expressed in Corn and Purchasing Power.

There are various ways of expressing values other than in terms of money. Because corn is such an important factor in the production of beef the price of beef cattle may properly be shown in bushels of corn (Fig. 57). Such a presentation, covering a 12-year period from 1910 to 1921, inclusive, indicates a wide variation from time to time in the relative values of beef cattle and corn. For example, in February, 1913, the price of 100 pounds of good beef cattle was equivalent to that of 17.19 bushels of corn, whereas in November, 1917, 100 pounds of beef cattle equaled in value only 5.02 bushels of corn.

In May, 1920, 6.06 bushels of corn equaled in value 100 pounds of beef cattle, whereas less than one and one-half years later, or in October, 1921, it required 16.87 bushels of corn to equal in value 100 pounds of beef cattle. The importance of studying such ratios lies in the fact that when corn is relatively high cattle feeders are inclined to sell corn rather than to feed it to cattle. When, however, corn is relatively cheap, a higher return is sought by feeding it to cattle.

Another way in which cattle prices may be expressed is in terms of purchasing power of other commodities. It may happen that when prices expressed in dollars and cents are relatively high they are actually low in comparison with the level of general commodity prices. It is not of so great importance how much money the stockman gets for his cattle as how many things he can receive in exchange for his cattle.

A comparison of cattle prices with their purchasing power in terms of general commodities from 1878 to 1921 (Fig. 58) shows that during the first 33 years of that period, or up to 1912, cattle were relatively higher in price than other commodities. From 1912 to 1914 they were about equal, but in 1914 the purchasing power began to decrease, and from 1915 to 1919, while cattle prices had a sharp advance, the advance did not equal that in the price of general commodities, and for that reason the purchasing power actually decreased. From 1919 through 1921 both cattle prices and purchasing

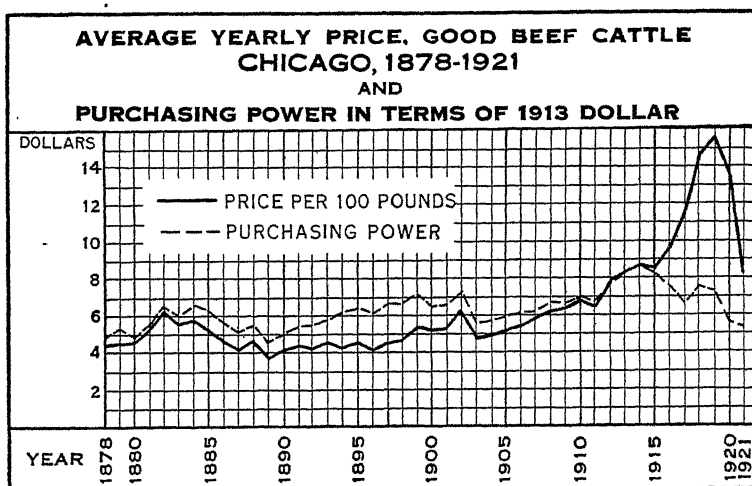


FIG. 58.—Since 1878 the lowest yearly average price of good beef cattle was reached in 1889, the price being \$3.80 per 100 pounds. The highest yearly average price, \$15.50, was reached in 1919. But 100 pounds of cattle would purchase more commodities (food, clothing, etc.) in 1914 than in any other year, and less in 1921 than in any year since 1890. Similar prices by months since 1913 are shown in Figure 63.

power had a sharp decline, but up to the end of 1921 the purchasing power of cattle was still considerably below the actual price.

Live Steer Prices Compared with Beef.

A comparison of yearly average prices of live steers, wholesale beef, and certain retail cuts from 1913 to 1921, by expressing each in per cent of increase or decrease of its 1913 average (Fig. 59), develops the fact that from 1913 to 1916 prices of live steers and of wholesale and retail beef fluctuated, as a rule, in about the same proportion. From 1916 to 1919, however, steer prices advanced much more, proportion-

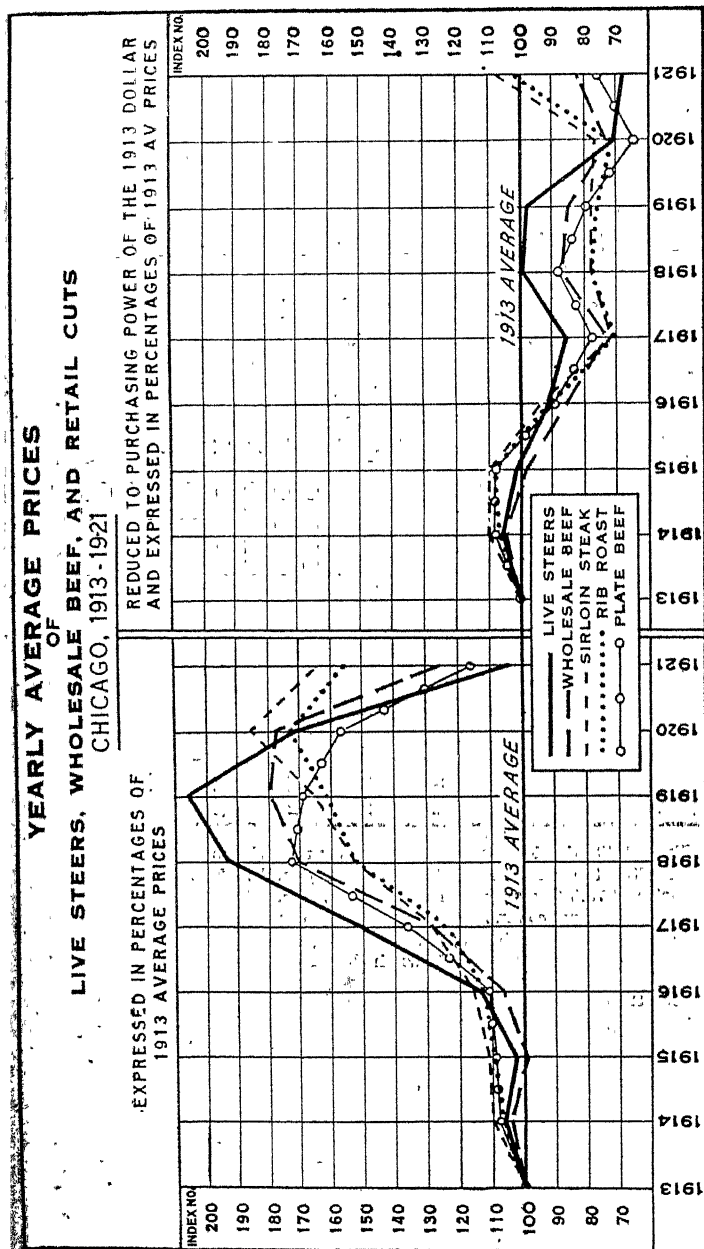


Fig. 59.—The early average prices of live steers from 1916 to 1918 showed a more rapid rise than either prices of wholesale beef or retail cuts. The increase in 1919 over 1918 was at about the same rate, but from 1919 to 1920 the yearly average price of steers declined sharply, whereas the price of wholesale beef dropped very little, and the prices of sirloin steak and rib roast continued to advance. The price of steers in 1921 was practically at the 1913 level, while wholesale beef was 25 per cent above, and the more expensive retail cuts were 50 to 70 per cent above 1913 prices. The right-hand side of the graph shows that since 1915 the prices of cattle and beef have been lower than the average price of other commodities, compared with the 1913 levels.

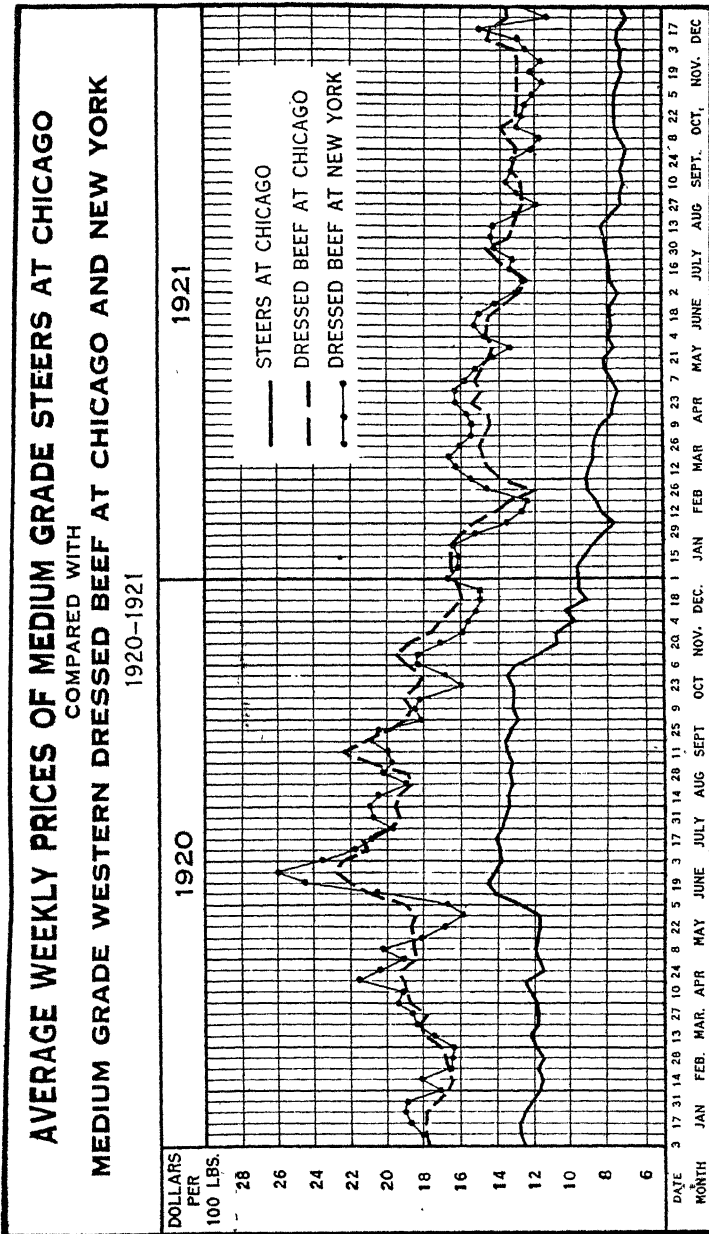


FIG. 60.—Weekly average prices of live steers at Chicago fluctuated less widely during 1920 and 1921 than prices of dressed beef (wholesale) of corresponding grade at Chicago and New York. Despite transportation and other costs involved in getting dressed beef from Chicago to the Atlantic seaboard, New York prices were frequently lower than those at Chicago. It should be noted that the graph is not carried downward to the zero line, consequently the spread between prices of cattle and dressed beef is much less proportionately than indicated. But it is significant that whereas in 1921 the price of steers decreased over one-third as compared with 1920, the spread between the prices of steers and of dressed beef remained almost unchanged.

ately, than did either wholesale or retail beef prices. The peak year for live steers was 1919, and in that year prices averaged 106 per cent over the 1913 level. Chicago wholesale beef prices, however, were 79 per cent over the 1913 average.

It is noteworthy in this connection that retail prices of plate beef were highest a year earlier, or in 1918, whereas retail prices of sirloin steak and rib roast averaged highest a year later, or in 1920. Of the retail cuts considered, sirloin steak showed the greatest advance, but even at the high-

est point, sirloin steak was only 85 per cent above the 1913 average, as compared with 106 per cent in live steers.

Although live steers showed the greatest proportionate advance, the decline was sharper and much more precipitous than was that of either wholesale or retail beef prices. This is indicated by the fact that the 1921 average price of live steers was only 3 per cent above the 1913 average, whereas wholesale beef prices were 25 per cent and retail prices of plate beef 16 per cent above

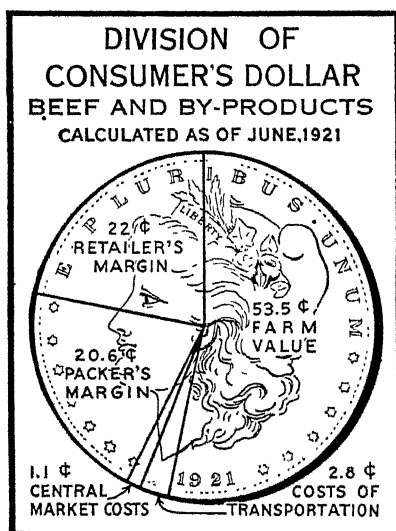


FIG. 61.—Where does the consumer's dollar go? is always a pertinent question. A computation made in June, 1921, indicated that a little over half went to the cattle producer.

that level. For that year the average retail price of sirloin steak was 64 per cent and of rib roast 55 per cent above the 1913 average.

Expressing the above increases and decreases in terms of the purchasing power of the 1913 dollar, it is found that during 1914 the purchasing power of not only live steers but also wholesale and retail beef cuts exceeded that of 1913. The same was true of steers and retail cuts in 1915, but wholesale beef had dropped 2 per cent below the 1913 average. By 1916, however, the purchasing power of all of these commodities had fallen below that level and remained so

through 1920. In 1918 the purchasing power of live steers came within 2 per cent of equaling the 1913 average, but that of wholesale and retail beef cuts was considerably below that level. (See right-hand side of Fig. 59.)

In 1920 a divergent movement occurred. The purchasing power of live steers had dropped 3 per cent below that of wholesale beef, 6 per cent below sirloin steak, and 1 per cent below rib roast, and was only 6 per cent above plate beef. In 1921 the purchasing power of live steers was 32 per cent under the 1913 average, while rib roast was 1 per cent and sirloin steak 7 per cent above that level.

Beef is the most important product resulting from cattle slaughter. For that reason it is reasonable to expect a rather close correlation between the price of beef cattle and wholesale dressed beef. A comparison of weekly average prices of beef cattle at Chicago with wholesale prices of a corresponding grade of beef at Chicago and also at New York for the two years 1920 and 1921 (Fig. 60) shows that in general cattle prices were steadier than beef prices; that any pronounced or sustained variation in the price of one usually resulted in a similar movement in the price of the other; that beef prices at Chicago, as a rule, fluctuated less widely than those at New York; that at Chicago the differential between the price of cattle and wholesale prices of beef is fairly constant; and, finally, that despite the added costs of transportation and other charges involved in getting beef from Chicago to the Atlantic seaboard, New York prices were frequently lower than those at Chicago. In fact, in the two years considered, during one week New York prices averaged the same as Chicago, during 52 weeks they were higher, and during 51 weeks, or nearly 50 per cent of the time, they were lower.

Another factor which has considerable bearing on cattle prices is the demand for the important by-products, such as hides, tallow, and oleo oil, and the prices resulting therefrom. A comparison of such prices (Fig. 62) before, during, and following the war shows that under normal conditions there is a fairly close correlation between prices of cattle and of these three commodities. During 1915 and 1916 this was rather marked. Early in 1917, however, the World War began to exert a rather powerful influence over prices of

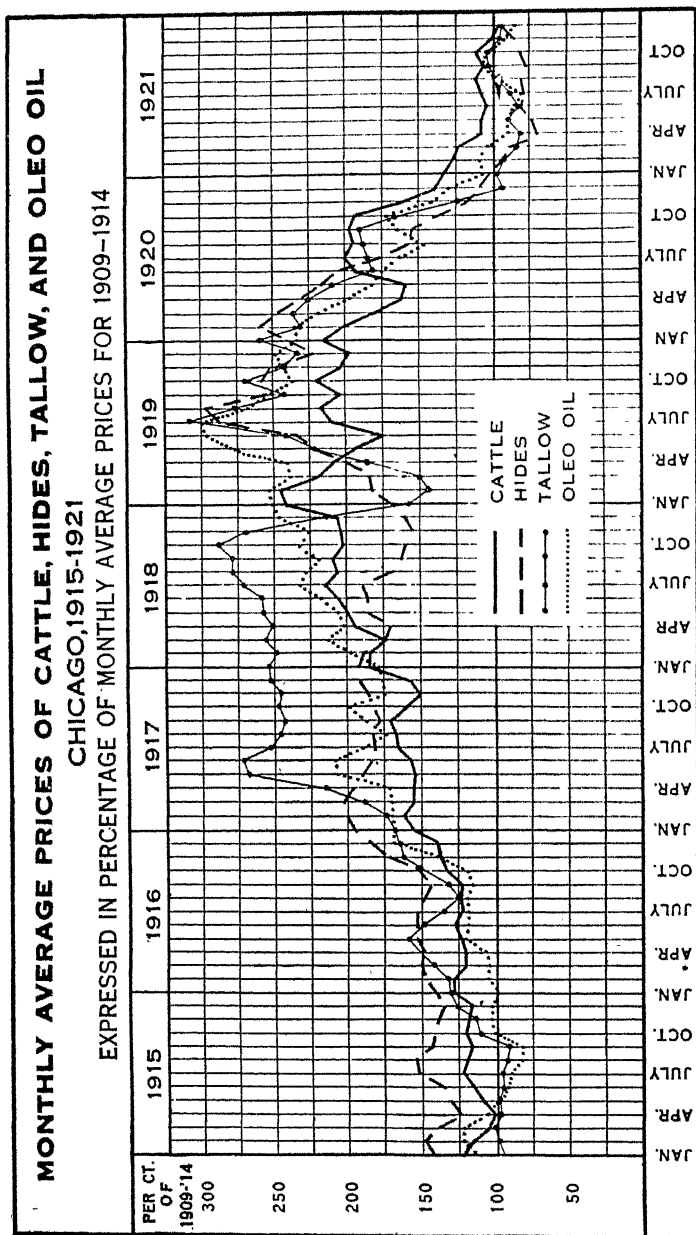


FIG. 62.—Normally there is a rather close correlation between the prices of cattle and those of the important by-products, such as hides, tallow, and oleo oil. This is shown in the above graph during the years 1915 and 1916, 1920, and 1921. During and immediately following the war, however, by-product values fluctuated over a wide range and at times seemed to have little or no relation to the price of cattle. Note the relatively low prices of by-products as compared with cattle prices during 1921.

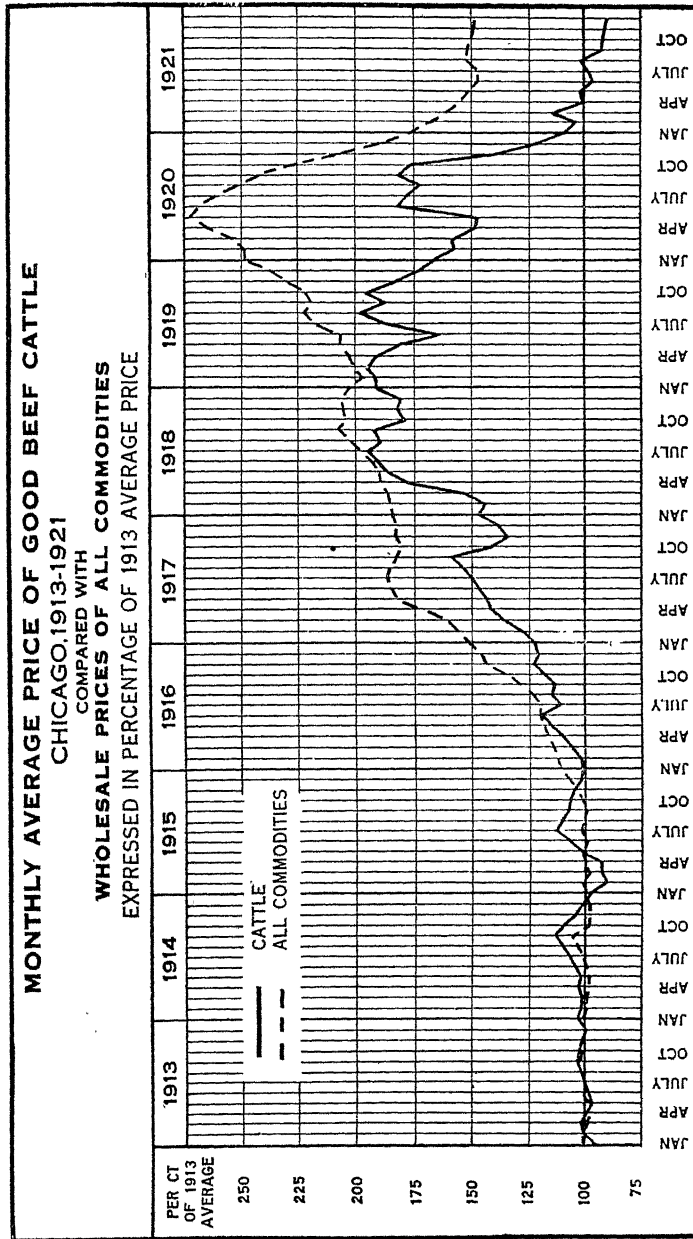


FIG. 63.—From January, 1913, to the close of 1915 wholesale prices of all commodities, including beef cattle, were fairly steady. Early in 1916 all prices began to advance and the general commodity index continued almost steadily upward until May, 1920. Cattle prices advanced more slowly during 1917, but by July, 1918, had almost overtaken commodity prices. After this date cattle prices made practically no advance, and were declining in 1919 and during the early part of 1920, when commodity prices were advancing. At the close of 1921 cattle prices were 11 per cent below the 1913 average, while other commodities were still 49 per cent above that level. Note that the scale of the graph is not carried down to zero.

most commodities. As a result of this, tallow prices advanced out of all proportion to the advance in either cattle or other important by-products.

On the signing of the armistice near the close of 1918, tallow prices fell precipitately, whereas cattle and oleo oil, being more particularly peace-time articles of trade, advanced. In the speculative period of 1919 practically all by-product prices went even higher than they had during the period of actual conflict, while cattle prices declined sharply. Toward

NUMBER OF 1000 POUND CATTLE
REQUIRED TO PURCHASE
A WAGON, A CORN BINDER, A GRAIN BINDER AND A GANG PLOW
IN ILLINOIS IN 1913, IN 1920 AND IN 1921.

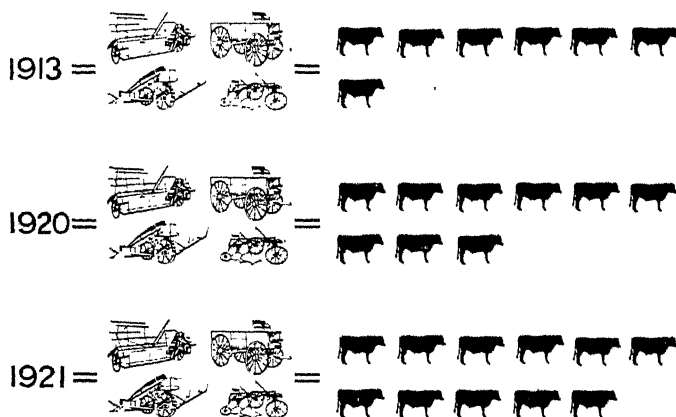


FIG. 64.—In 1913 seven cattle in central Illinois would purchase a wagon, a corn binder, a grain binder, and a gang plow, whereas in 1920 two more cattle were required, and in 1921 four more cattle. (See Figs. 58 and 63.)

the end of the year, however, there was a readjustment, and during 1920 and 1921 the normal close relationship between cattle prices and those of hides, tallow, and oleo oil was maintained. This was especially striking during the last few months of the year.

Cattle Prices and General Commodity Prices.

Having considered the effect on cattle prices of the factors most closely related to cattle, it remains to discover how cattle prices respond to changes in the general level of com-

modity prices. (Figs. 63 and 64.) From the beginning of 1913 to June, 1916, cattle prices and general commodity prices showed a fairly close relationship. At times cattle were slightly higher and at other times slightly lower than the level of other important commodities. Early in 1916, however, all prices, including those of cattle, started upward, and so far as general commodities were concerned the trend, with only one or two rather slight interruptions, continued until May, 1920. Although cattle prices shared to a certain

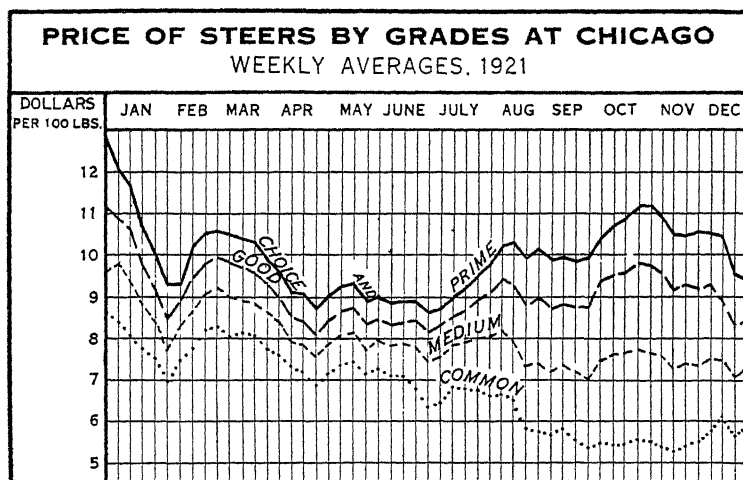


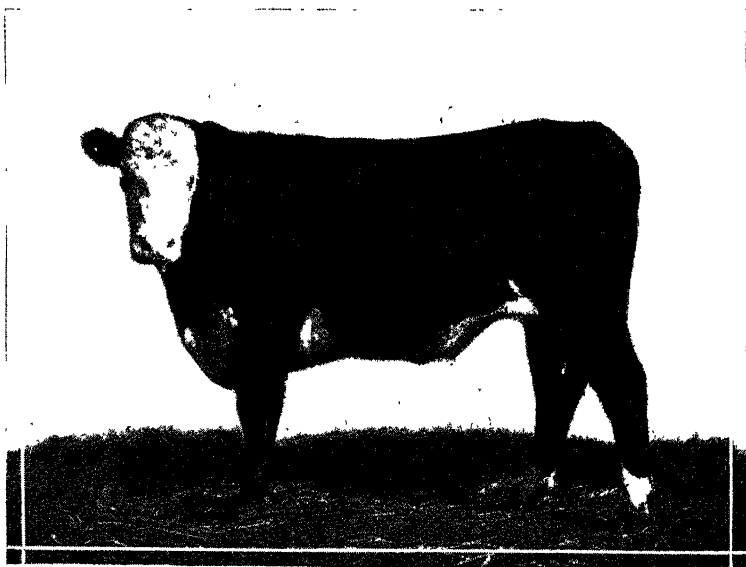
FIG. 65.—Grade in large measure determines the price paid for cattle. In the late spring, when fattened cattle are being received from the feed lots in large numbers and the movement of common cattle from the Western Range is light, the difference in price between choice and common steers is much less than in the fall months when the conditions are reversed. (See Fig. 52.) It is interesting to note that in 1921 the price of choice steers was higher in the fall months than in the spring, and the price of common steers was much lower. The scale of the graph is not carried down to zero.

extent in this movement, at no time after the middle of 1916 did their rise equal the rise in general commodity prices. Not only was that true, but cattle prices reached their peak in August, 1919, whereas general commodity prices continued upward almost a year longer.

During the reconstruction period of 1920 and 1921 cattle prices not only took their full share of liquidation, but closed the year 1921 below the pre-war average, while general commodity prices were still nearly 50 per cent above that level.

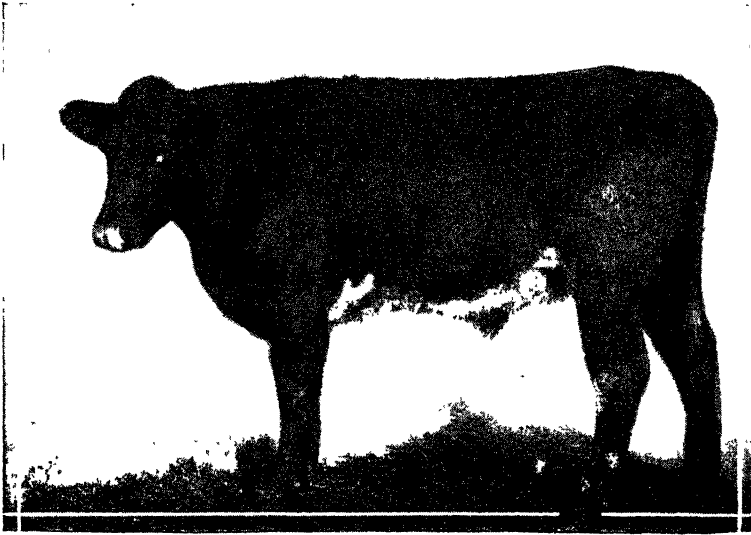


Choice Beef Steer.

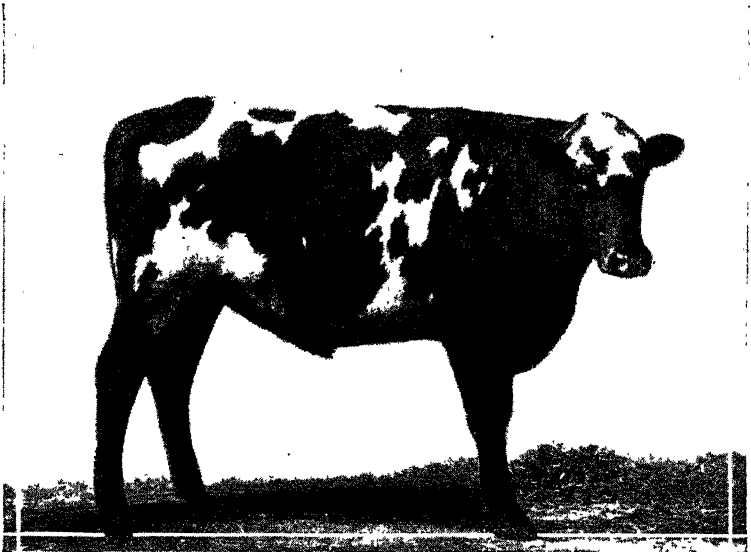


Good Beef Steer.

FIG. 66.—In market practice a distinction is made between "beef" steers and "feeder" steers. In general, "beef" steers are those which go to slaughter, and "feeder" steers those which are returned to the country for further feeding. Four grades of beef steers—choice, good, medium, and common—are illustrated on this and the opposite page. Note in the choice



Medium Beef Steer.



Common Beef Steer.

steer the straight, broad back, the thick loin and full round, the depth of rib and flank, and the generally smooth conformation, with an even covering of fat. Also note that the lower grades are deficient in one or more of these characteristics. Comparison with Figure 46 shows that, grade for grade, the chief difference between "beef" and "feeder" steers consists in the conformation and the amount of flesh and fat carried. The "feeder" steer shows ability to put on fat and flesh if properly fed, whereas the "beef" steer shows the results of feeding.

Standardized Grades for Cattle and Beef.

While the factors considered in the foregoing discussion affect cattle prices in varying degrees and at different times, there is another factor which operates at all times and very largely determines the price which the producer gets for his beef animals. That factor is grade. Choice and prime cattle invariably bring more money than do common. However, the price differentials between grades are by no means constant, as may be seen by considering the graph in Figure 65, which indicates the course of weekly average prices at Chicago during 1921. This graph shows that the extreme

Side of Beef Showing Wholesale Cuts

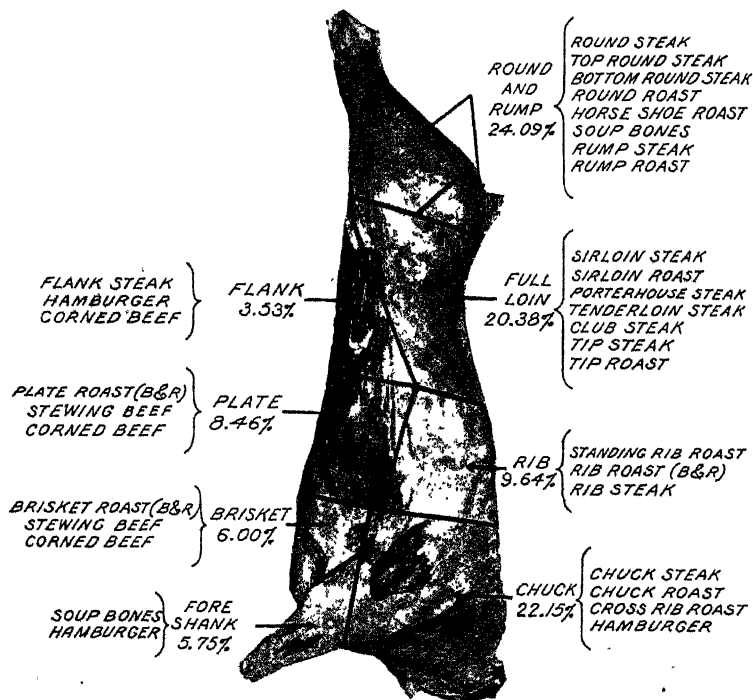


FIG. 67.—Side of beef and important wholesale and retail cuts. There are numerous ways of cutting up a beef carcass, the requirements of the trade in different parts of the country determining which method shall be used. The cuts shown in the above figure are based on what is known as the Chicago method of cutting. Figures appearing under the name of each wholesale cut indicate the per cent of the total weight of the side represented by that cut.

range in prices of beef steers was widest during the latter part of October and narrowest during the last week of May. Although there are certain variations in the time when these expansions and contractions in the price range occur, a differential between the grades is always present.

Because grade so largely determines the price, the existence or lack of a standardized system of grading becomes a matter of vital importance to the producer of beef animals. Until very recently no such system existed. Heretofore most

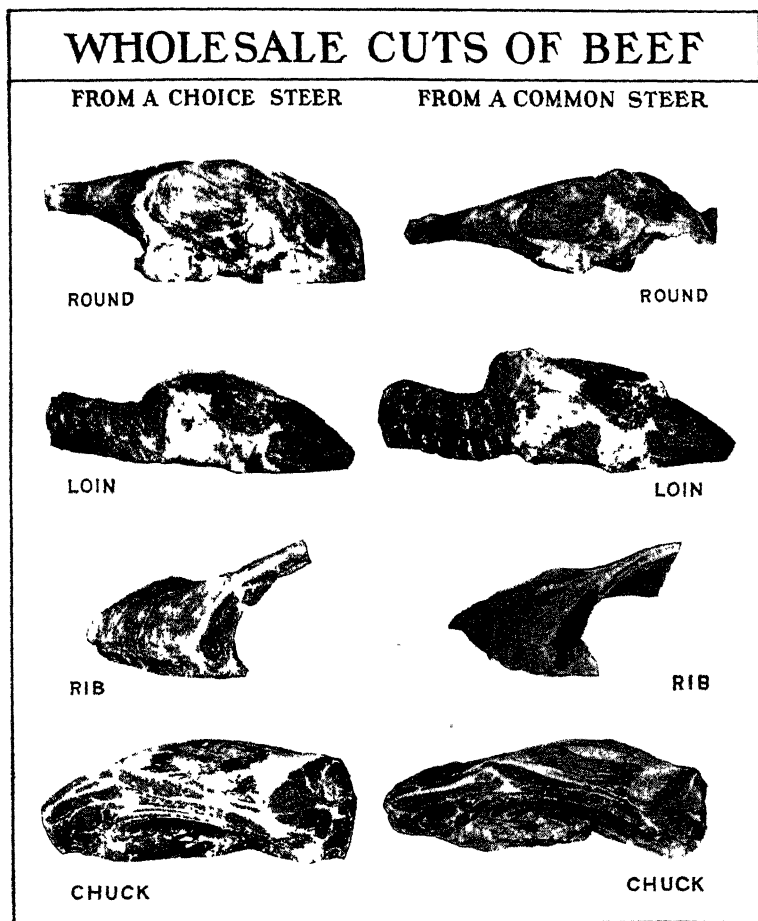


FIG. 68.—The difference in appearance between the meat of a choice and that of a common beef steer. Note the greater thickness, covering of fat, and marbling of fat in the lean in the cuts from the choice steer. The choice cuts are also more tender and palatable, and therefore in greater demand.

live-stock markets have used a certain group of trade terms to designate classes and grades of cattle and to describe market and trade conditions. The definitions of these terms, however, varied not only between markets but even at the same market at different seasons of the year. This situation made it virtually impossible to interpret market reports accurately.

The United States Department of Agriculture has endeavored to assist in solving this problem by adopting a standard set of classes and grades for cattle and calves and formulating simple and easily understood definitions for each.

Cattle and calves for slaughter have been divided into seven classes: Steers, baby beef, heifers, cows, stags, bulls, and veal calves. Some of these are still further divided into subclasses based on weight, such as heavyweights, mediumweights, and lightweight.

Having grouped the animals in these seven classes, such grouping being based largely on sex and age, each class is further subdivided into grades. Although the number of grades varies somewhat between classes, the more important grades are: Prime, choice, good, medium, and common, four of which are illustrated in Figure 66. Virtually the same classification has been applied to stocker and feeder cattle and calves.

As there is even more confusion in the minds of most people regarding the various classes and grades of dressed meats than of live animals, a similar classification of dressed beef and veal has been made. These grades of the dressed meat correspond with those of the live animals. In other words, a "choice" steer must produce "choice" beef and a "common" steer "common" beef.

As a basis of understanding the classes and grades of beef, an idea of the important wholesale and retail cuts, their location in the carcass, and the percentage of the total weight of the "side" which each cut comprises, is necessary (see Fig. 67).

Methods of cutting up a beef carcass vary in different parts of the country, and it is obvious that the number of pounds in the different cuts and the percentage of the carcass weight represented by a given cut will depend upon

the method of cutting adopted. The Chicago system of cutting is more widely used than any other. However, as a large percentage of the total amount of beef produced is consumed along the Atlantic seaboard, the various eastern methods of cutting beef are also of interest and importance. Table 10 shows the result of a cutting test made in Washington, D. C., late in 1921.

The difference between choice and common beef with respect to texture, fiber, quantity, and distribution of fat is shown in Figure 68.

With a standardized system of grading both cattle and beef generally understood and in common use, the producer will be able to market his live stock more intelligently and therefore more profitably, and the consumer will be in position to purchase his meat more wisely and economically on account of his more thorough and definite knowledge of market conditions.

TABLE 10.—*The weights of the wholesale and retail cuts of an open side of beef weighing 291 pounds.¹*

	Pounds.		Pounds.
Round and rump (62 pounds) :		Chuck (58 pounds) :	
Top round steak.....	12	Chuck roast	32
Bottom round steak.....	11	Cross rib roast	11
Round roast.....	2½	Boneless neck	9
Rump roast	12½	Fat	1½
Shank meat	9½	Bones.....	4½
Soup bones.....	5½	Flank (9½ pounds) :	
Fat.....	1½	Flank steak.....	1½
Bones.....	7½	Lean trimmings	3½
Full loin (65 pounds) :		Fat.....	4½
Sirloin.....	22	Plate (20¼ pounds) :	
Porterhouse steak	17½	Stewing beef	20
Tip steak	5½	Lean trimmings	½
Tip roast	5½	Brisket (21¾ pounds) :	
Hanging tenderloin	2	Sticking piece	4½
Kidney	1	Stewing beef	16½
Suet	9½	Fat.....	1½
Fat.....	1	Fore shank (22¾ pounds) :	
Bones.....	1	Shoulder clod.....	9½
Rib (30 pounds) :		Shank meat.....	5
Rib roast.....	29	Soup bones.....	4
Bones	1	Bones.....	4

¹ Loss in making wholesale cuts 1½ pounds, due largely to the fact that in weighing the cuts one-fourth pound was the smallest unit considered.

However, the matter of standardized grading, important as it is, is only one of the problems involved in marketing beef cattle. Many different agencies are involved in getting cattle from the farm or ranch to the consumer. Among the important ones are the country buyers or cooperative shipping associations, transportation companies, feeding stations, stockyards, commission men, packers and slaughterers, cold-storage establishments and warehouses, wholesale and retail meat dealers, and banks and loan companies. These are links in the chain which connects the cattle producer with the consumer of beef and beef products. If there is a break or weak point in the chain, both producer and consumer are bound to be affected.

Each of these agencies constitutes a distinct problem, but there are many more. Price fluctuations, competition for both the domestic and foreign markets, and lack of accurate and unbiased market news are among the most outstanding. All of these problems must be solved if the producer of beef cattle is to obtain the fullest returns for his efforts and the consumer is to obtain beef and veal of satisfactory quality at a fair price.

Consumption of Beef.

Consumption is the aim and inspiration not only of all production but of all marketing. If there is little consumptive demand for a commodity, prices will soon decline to a point below the cost of production and ultimately both production and marketing will cease. While consumption exerts a powerful influence over prices, there is a reciprocal action in which prices vitally affect consumption. The demand for beef and veal on the part of the consuming public is by no means as constant as many suppose, but varies widely over a period of time.

Exact data showing per capita consumption of beef and veal are not easily obtained and are not available over any considerable time. The most accurate figures pertaining to this matter begin with 1907, shortly after Federal inspection of meat was first inaugurated. Considering the 15 years, 1907 to 1921, inclusive, per capita consumption has ranged from 87 pounds in 1907 to 60 pounds in 1915, a net variation of 27 pounds per capita (Fig. 69). When these per capita

figures are converted into total consumption by multiplying them by the total population, the importance to the cattle producer of such a variation in consumption at once becomes apparent. The consumption of beef per capita has declined rather steadily during the past 15 years. If the two periods, 1907 to 1910 and 1911 to 1921, are compared, the decrease in consumption per capita amounts to approximately 20 per cent (Fig. 71 and Tables 11 and 13).

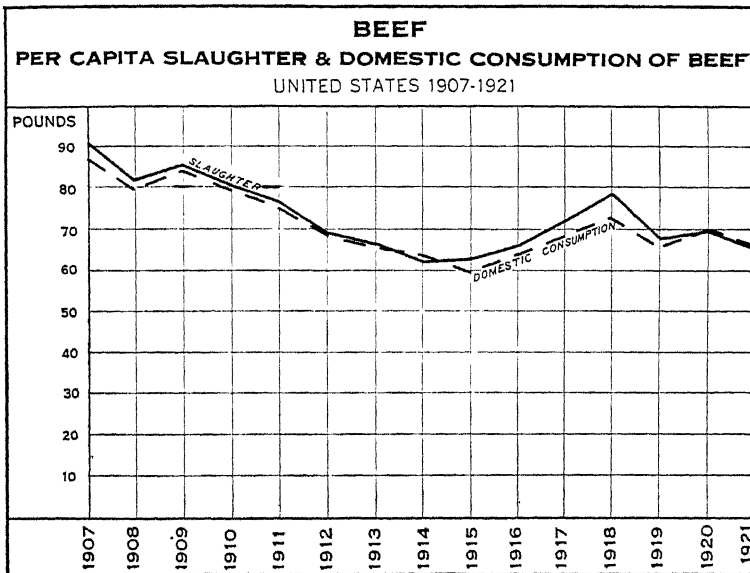


FIG. 69.—From 1907 to 1921, inclusive, excepting 1914, the amount of beef and veal slaughtered per capita in the United States has been slightly greater than the amount consumed, the surplus being exported. In 1914, imports exceeded exports, consumption being greater than the domestic slaughter. The downward trend in per capita consumption from 1907 to 1914, reversed during the war period, but during the last three years trending downward again, is significant.

The problem is still further complicated for the producer by the fact that one market wants heavy beef and another light beef. High-class hotels in the large cities want prime, fat, and finished beef, while the average housewife wants beef involving less waste. In warm weather the chief demand is for steaks and chops, while the winter trade demands more roasts and boiling beef. The orthodox Jewish trade uses only the forequarters, while gentiles, as a rule, prefer hindquarter beef.

Not only is the total and per capita consumption of interest but it is worth while to inquire where the bulk of the beef and veal produced in the United States is consumed

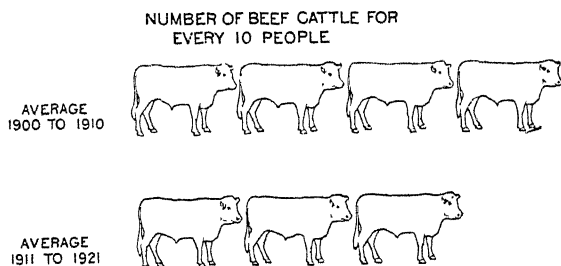


FIG. 70.—The average number of beef cattle in the United States for every 10 people decreased from 4.2 head for the years 1900–1910 to 3.1 head for the years 1911–1921, or 26 per cent. See Table 11 for statistics of consumption.

(Figs. 72 and 73). A survey made in 1920 indicated that at that time nearly 32 per cent was consumed in the North Atlantic States, which comprise New England, New York, Pennsylvania, and New Jersey. The next largest quantity, or 24 per cent, was consumed in the east-north-central division. In other words, more than 55 per cent of the total consumption of beef and veal occurred in the territory east of the Mississippi and north of the Ohio River and Maryland. The smallest total consumption occurred in the South Atlantic division, comprising the States of Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida. Per capita consumption showed almost as wide variations between divisions of the country as did total consumption, ranging from 83 pounds in the Western division to 39 pounds in the South-Central. The North Atlantic division, which was first in total consumption, was second in per capita consumption.

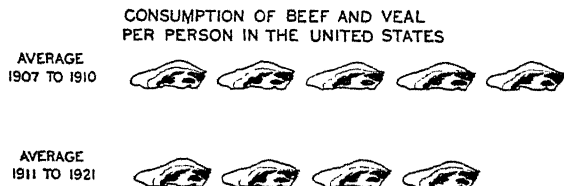


FIG. 71.—The per capita consumption of beef and veal in the United States decreased from 82 pounds in the period from 1907 to 1910, inclusive, to 67 pounds in the period 1911 to 1921, inclusive, or 18.2 per cent. This per capita decrease in consumption is smaller than the decrease in number of animals (see Fig. 70), a fact which is accounted for by the smaller net exports of cattle and beef in recent years, the slaughter of animals at an earlier age, and the increasing supply of meat from dairy cattle.

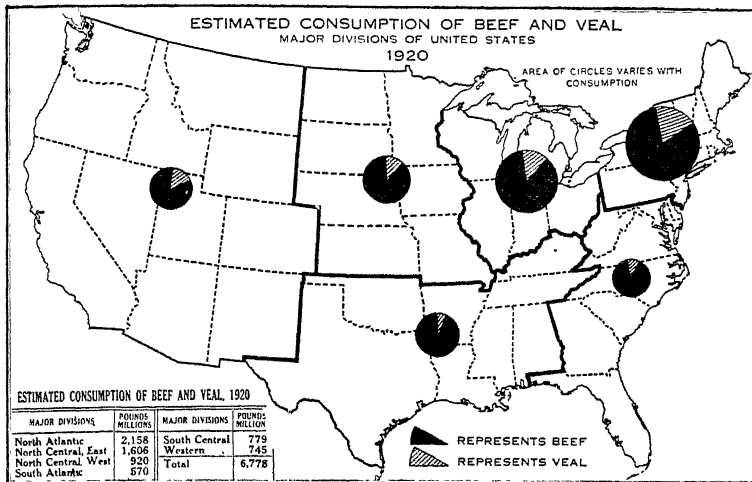


FIG. 72.—The size of the circles shows the relative quantities of beef and veal consumed in the six geographic divisions of the United States, as estimated by the Bureau of Agricultural Economics. In 1920 the North Atlantic States consumed about 32 per cent of the total consumption of the United States, and the East North Central States about 24 per cent, these two divisions consuming over half of the beef and veal of the nation. The per capita consumption in the Northern States was about 75 pounds, in the Western States about 85 pounds, and in the Southern States about 40 pounds. (See Figs. 21, 53, and 54.)

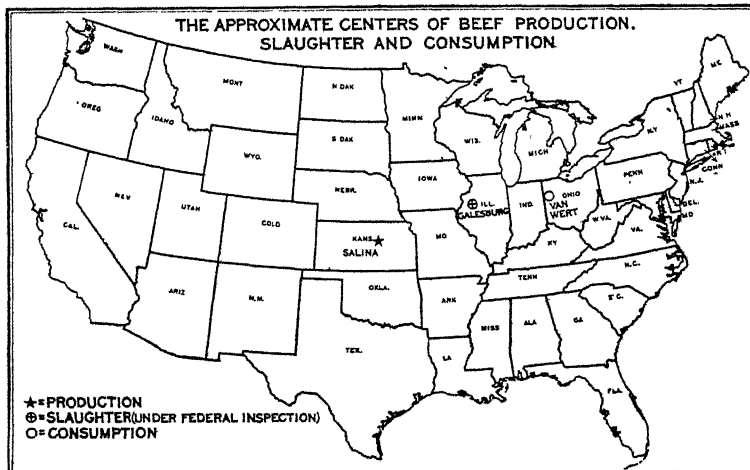


FIG. 73.—The center of beef production of the United States is in central Kansas, and the center of consumption is in western Ohio, over 700 miles eastward. Between these two centers is the center of slaughter under Federal inspection, which indicates the general eastward movement of beef before, as well as after, slaughter. These centers were found by determining the intersection of north and south and east and west lines which divide the production, slaughter, and consumption, respectively, into four

TABLE 11.—*Estimated annual slaughter, exports, and consumption of beef and veal in the United States.*

BEEF.

Calendar year.	Slaughter			Exports.	Imports (less re-exports).	Consumption.	
	Total.	Federally inspected.	Other.			Total.	Per capita.
	<i>Million pounds.</i>	<i>Million pounds.</i>	<i>Million pounds.</i>	<i>Million pounds.</i>	<i>Million pounds.</i>	<i>Million pounds.</i>	<i>Pounds.</i>
1907.	7,319	4,336	2,983	352	.....	6,967	79.7
1908.	6,676	3,955	2,721	228	.....	6,448	72.4
1909.	7,071	4,189	2,882	163	.....	6,908	76.2
1910.	6,733	4,054	2,679	110	.....	6,623	71.8
1911.	6,497	3,984	2,513	92	.....	6,405	68.4
1912.	5,920	3,731	2,189	56	.....	5,864	61.7
1913.	5,913	3,595	2,318	46	35	5,902	60.8
1914.	5,639	3,601	2,038	95	253	5,797	58.9
1915.	5,816	3,979	1,837	399	125	5,542	55.7
1916.	6,118	4,362	1,756	287	23	5,854	58.1
1917.	6,686	5,169	1,517	376	25	6,335	62.0
1918.	7,320	5,638	1,682	728	125	6,717	64.8
1919.	6,283	4,774	1,509	314	53	6,022	57.3
1920.	6,463	4,578	1,885	164	43	6,498	61.1
1921.	6,194	4,113	2,081	52	23	6,223	57.7

VEAL.

1907.	626	210	416	.....	.....	626	7.1
1908.	605	203	402	.....	.....	605	6.8
1909.	684	230	454	.....	.....	684	7.5
1910.	687	235	452	.....	.....	687	7.4
1911.	657	229	428	.....	.....	657	7.0
1912.	668	239	429	.....	.....	668	7.0
1913.	488	176	312	.....	.....	488	5.0
1914.	433	158	275	.....	5	438	4.4
1915.	428	168	260	.....	1	429	4.3
1916.	536	220	316	.....	1	537	5.3
1917.	662	296	366	.....	1	663	6.5
1918.	791	352	439	.....	1	792	7.6
1919.	860	378	482	.....	5	865	8.2
1920.	936	402	534	.....	8	944	8.9
1921.	888	391	497	.....	4	892	8.3

For several years past the general trend of consumptive demand has been toward lighter cuts of meat, with a corresponding tendency to produce cattle of a lighter weight and earlier age. The consumption per capita of veal has greatly increased during the last seven years, as indicated by the increase in calves slaughtered. Lack of adequate credit

for production, high retail prices, unemployment, and anti-meat propaganda have curtailed consumption per capita considerably during the last three years.

Trend of Beef Production.

There has been a marked change in the character of the beef-cattle industry of the United States since 1850 with respect to the age to which the animals destined for slaughter are kept on farms. In earlier years of our history steers were commonly kept to 4 or 5 years of age before slaughtering. The censuses for 1900 and 1920, in which the same age schedules were used, provide a basis for the calculations in the following table, which show that there has been an increase in the percentages of beef calves, heifers, cows, and bulls, and a decrease in the percentages of steers, especially aged steers.

TABLE 12.—*Changes in number of various age and sex groups of beef cattle in the United States (1900 to 1920).*

Groups.	Estimated number, Jan. 1, 1900.	Actual number, Jan. 1, 1920.	Relation to total.		Increase or decrease.
			1900	1920	
	<i>Head.</i>	<i>Head.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Calves under 1 year old.....	8,453,000	8,809,000	22.70	24.55	4.21
Heifers 1 year old and under 2.....	3,468,000	4,035,000	9.31	11.24	16.35
Cows 2 years old and over.....	10,821,000	12,730,000	29.07	35.47	17.65
Bulls 1 year old and over.....	629,000	735,000	1.69	2.05	16.85
Steers 1 year old and under 2.....	6,448,000	4,728,000	17.32	13.18	-26.67
Steers 2 years old and over.....	7,412,000	4,847,000	19.91	13.51	-34.61
Total beef cattle.....	37,231,000	35,884,000	100.00	100.00	-3.62

About 1905 South America and Australasia became the chief sources of surplus beef. However, during the World War production in the United States was so stimulated that during 1917 and 1918 combined over 1,000,000,000 pounds of beef were exported, which was 7 per cent of our production and 22 per cent of the exports of the world during those years. At the same time our per capita consumption increased considerably.

Figures 69, 70, 71, and 74 and Tables 11 and 13 show some of the changing relations between our population and our

beef supply since 1907. There are no figures available giving separately the number of beef cattle and dairy cattle slaughtered for beef.

TABLE 13.—*Ratio of cattle to population, and of slaughter to cattle and to population, 1907-1921, with 10-year average, 1907-1916, and subsequent years in percentage of 10-year average.*

Year.	Beef cattle per 100 people.	Dairy cattle per 100 people.	All cattle per 100 people.	Cattle slaughtered.		Calves slaughtered.	
				Per 100 cattle.	Per 100 people.	Per 100 cattle.	Per 100 people.
1907.....	43	35	78	20	15	9	7
1908.....	40	34	74	19	14	9	7
1909.....	38	34	71	21	15	10	7
1910.....	35	33	67	22	15	11	7
1911.....	33	32	65	21	14	10	7
1912.....	30	31	61	21	13	11	7
1913.....	28	31	59	20	12	9	5
1914.....	28	30	58	19	11	8	5
1915.....	28	30	59	18	11	8	5
1916.....	31	31	62	19	12	9	6
1917.....	32	32	64	21	13	11	7
1918.....	34	32	65	23	15	11	8
1919.....	34	31	66	20	13	13	9
1920.....	34	31	65	18	11	14	9
1921.....	32	30	62	18	11	13	8
10-year average, 1907-1916.....	33	32	65	20	13	9	6

REGARDING THE 10-YEAR AVERAGE OF 1907-1916 AS 100, THE FIGURES BELOW SHOW PERCENTAGES FOR DIFFERENT ITEMS IN SUBSEQUENT YEARS.

1917.....	96	98	97	105	102	115	111
1918.....	102	98	100	115	115	122	122
1919.....	104	97	101	98	98	139	139
1920.....	102	93	99	88	87	149	147
1921.....	95	94	95	90	85	142	134

The number of cattle in the United States increased 12,-200,000 from 1914 to 1919. During the last three years there has been a decrease of 2,000,000. The number of calves born in 1921 was over 600,000 more than in 1920, while in 1920 there were four and two-thirds millions less than in 1918. From the record established in 1918 the slaughter of cattle and calves decreased almost 1,500,000 in 1919 and 1920 com-

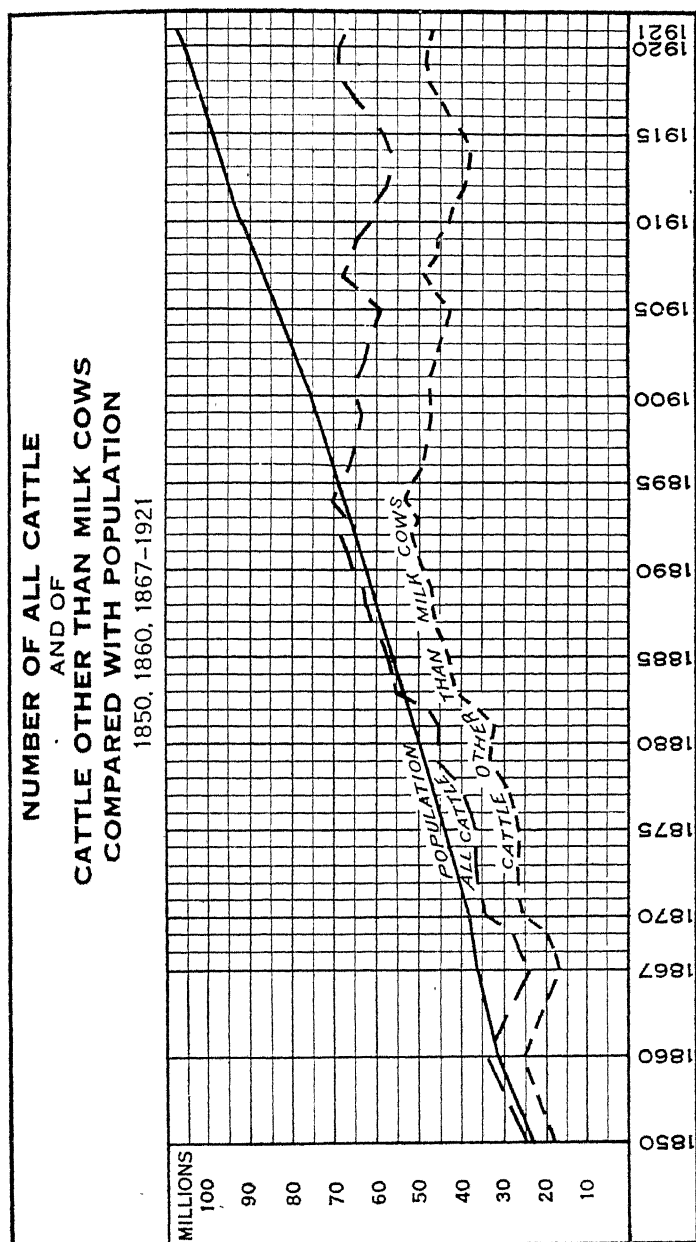


Fig. 74.—From 1850 to 1894 the total number of cattle in the United States, except during the Civil War, and also the number of cattle other than milk cows (mostly beef cattle), kept pace with the increase in population. Since 1894 both total cattle and cattle other than milk cows show no increase in number, while population has continued to increase practically a constant amount. (See Figs. 68, 70, and 71 and Table 13.)

bined, and more than 1,100,000 in 1921. Meanwhile the slaughter of calves, which had increased in numbers beyond previous records from 1914 to 1918, increased almost 1,300,000 in 1919 and almost 200,000 in 1920, but decreased almost 600,000 in 1921. This unusually large slaughter of calves in 1919 and 1920 contrasts strangely with the abrupt decline in cattle slaughter during the same period. It is accounted for partly by the droughty conditions in the West, which induced heavy marketings of young stock during 1919, and

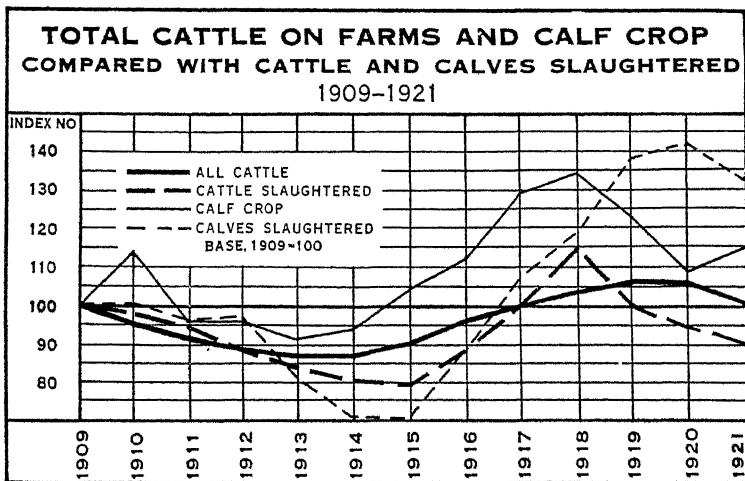


Fig. 75.—The trend of cattle production and slaughter was downward until 1914. The downward trend in production was checked by a larger calf crop in that year and by still larger calf crops from 1915 to 1918. In 1916 the slaughter increased and about two years later exceeded the calf crop. The calf crop began to decrease after 1918, but the number of calves slaughtered continued to increase until 1919. This resulted in a reduction of the number of cattle on farms after 1919. (See Fig. 76.)

the considerably higher prices for calves than for more mature cattle.

In other words the stagnant condition of the industry resulting from the termination of war-time consumption was relieved by the liquidation of the calves and light cattle for which the market demand and price were more favorable than for mature and heavy cattle. While the number of cattle has decreased the situation is not as serious as might appear, since the number of cattle is greater now than in any year from 1896 to 1917

The tendency is to produce earlier maturing cattle which are ready for market at an earlier age. The proportionate slaughter of calves and yearlings is much greater than formerly. The greater proportion of beef cows, as shown in Table 12, makes it possible to produce and market a larger number of beef animals each year. If a sufficient number of them are fattened as yearlings instead of being slaughtered as calves, more beef can be produced than if fewer cattle were raised but kept to a greater age as formerly. Therefore, with

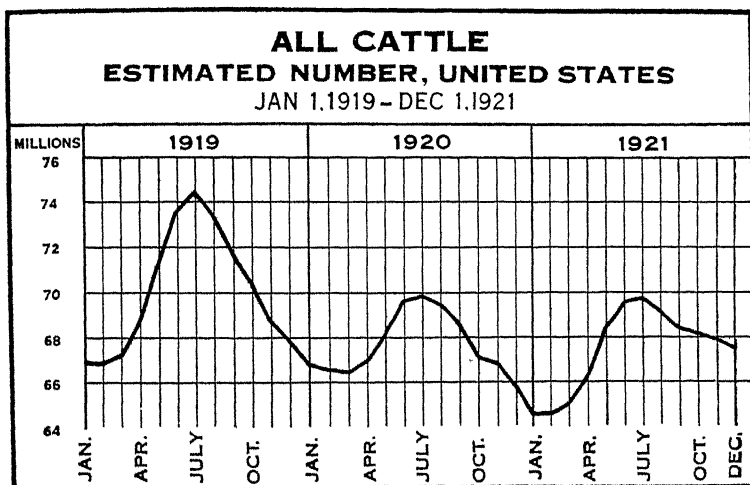


FIG. 76.—The spring calf crop increases the number of cattle, the annual maximum being reached usually in June or July (see Fig. 50). The number is then gradually reduced by slaughter, the annual minimum being reached in January or February (see Fig. 51). This indicates the consequences of taking the census at different times of the year. There was a considerable decrease in the number of cattle from 1919 to 1920, according to the estimates.

our present number of beef cattle and larger proportionate number of breeding cows, it is possible to produce more beef annually than the same number of beef cattle with a smaller proportion of cows would have produced when more steers were kept to a greater age. However, the system of using younger cattle for beef involves the use of more harvested feed per 100 pounds of beef produced, since a larger proportion of the gains in weight are made in the feed lot than was formerly the case when steers were carried four to five seasons on grass.

Bulletins Relating to Beef Cattle.

The Department of Agriculture has available for distribution a number of bulletins which deal with breeds, breeding, feeding, care, management, diseases, insect pests, farm equipment, fitting for show, judging, cost of production, marketing, and other related subjects pertaining to the beef-cattle industry. These publications can be secured free in small numbers from the Division of Publications, Department of Agriculture, or may be purchased in quantity at 5 cents each from the Superintendent of Documents, Government Printing Office, Washington, D. C. A partial list of these bulletins is given as follows: 612. Breeds of Beef Cattle; 724. Feeding Grain Sorghum to Live Stock; 790. Contagious Abortion of Cattle; 1008. Saving Farm Labor by Harvesting Crops with Live Stock; 1057. Cattle Fever Ticks and Methods of Eradication; 1068. Judging Beef Cattle; 1095. Beet-top Silage and other By-Products of Sugar Beet; 1135. The Beef Calf: Its Growth and Development; 1167. Essentials in Animal Breeding; 1179. Feeding Cottonseed Products to Live Stock; 1218. Beef Production in the Corn Belt.

There are also available Department of Agriculture and Bureau of Animal Industry bulletins, which give the results of experiments and investigations dealing with beef cattle and beef production. They may be purchased at the indicated prices from the Superintendent of Documents, Government Printing Office, Washington, D. C., as follows: 25. Shrinkage in Weight of Beef Cattle in Transit, 10 cents; 73. Raising and Fattening Beef Calves in Alabama, 5 cents; 575. Stock Poisoning Plants of the Range, 50 cents; 580. Beef Production in the South, 5 cents; 588. Increased Cattle Production on Southwestern Ranges, 5 cents; 628. Wintering and Fattening Beef Cattle in North Carolina, 10 cents; 631. Five Years' Calf Feeding Work in Mississippi and Alabama, 10 cents; 777. Fattening Steers on Summer Pasture in the South, 5 cents; 790. Range Management on the National Forests, 35 cents; 827. The Cut-Over Pine Lands of the South for Beef Cattle Production, 15 cents; 870. Effect of Winter Rations on Pasture Gains of Yearling Steers, 5 cents; 905. Principles of Live Stock Breeding, 15 cents; 954. Wintering and Summer Fattening of Steers in North Carolina, 5 cents; 1024. Feeding Experiments with Grade Beef Cows Raising Calves, 5 cents; 1042. Effects of Winter Rations on Pasture Gains of Calves, 5 cents; and Bureau of Animal Industry Bulletins 103, 131, and 147. Experiments in Beef Production in Alabama, 10 cents each; and Circular 166. Influence of Winter Rations on the Growth of Steers on Pasture, 5 cents.

Reports on the meat situation in the United States, cost of production and marketing of beef cattle, have been issued from the Office of the Secretary of the Department of Agriculture. These reports are no doubt available as references, and some of them may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C., as follows: 109. Statistics of Live Stock, Meat Production and Consumption, Prices, and International Trade for Many Countries, 35 cents; 110. Live Stock Production in the Eleven Far Western Range States, 15 cents; 111. Methods and Cost of Growing Beef Cattle in the Corn Belt States, 15 cents; 112. Utilization and Efficiency of Available American Feedstuffs, 5 cents; 113. Methods and Cost of Marketing Live Stock and Meats, 25 cents.



By A. M. AGELASTO, *Specialist in Cotton Classing, Bureau of Agricultural Economics*; C. B. DOYLE, *Botanist, Bureau of Plant Industry*; G. S. MELOY, *Investigator in Cotton Marketing*; and O. C. STINE, *Agricultural Economist, Bureau of Agricultural Economics*.

Cotton the Great Crop of the South.



THE greatest commercial crop of the United States is cotton. The corn crop exceeds it in total value (Fig. 1), but much the greater part of that crop is consumed on the farms where grown, whereas all of the lint and most of the seed of the cotton crop is sold off the farms. In comparing crop values often only the value of the lint of the cotton is considered. The hay crops and the wheat crop are usually about equal to and sometimes greater in value than the lint of the cotton crop, but, including the value of the cotton seed, the cotton crop stands second only to corn. Although American mills consume about half the crop, the value of the exports of raw cotton usually exceeds that of the exports of any other crop.

Cotton is the great crop of the South. It is the chief and often almost the only source of income to a large proportion

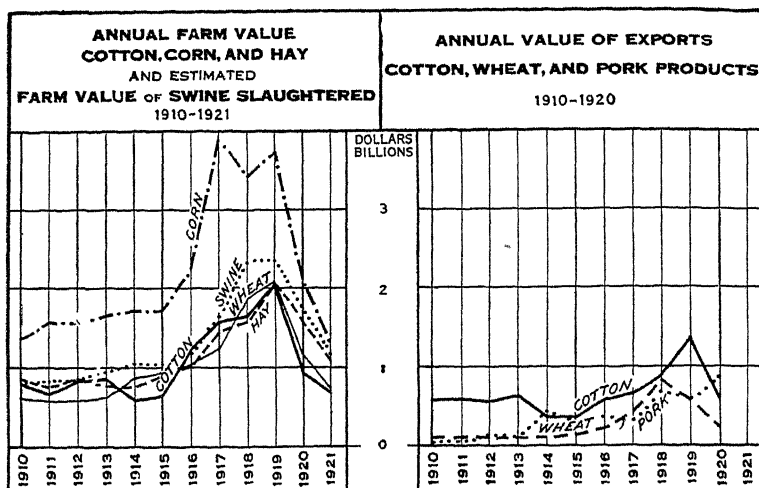


FIG. 1.—Note that cotton holds first place in exports but not in total value of the crop. Only the lint of the cotton is here included in the value of the crop. Adding the value of the seed, cotton would stand second to corn only in total value.

of the farmers in the Southern States. It is so important that low prices or any other factor which greatly reduces the profitableness of the crop greatly disturbs the economic life of the Southern States. When the cotton crop is good and brings good prices the South is prosperous.

There is a division of labor between the States of the North and those of the South by which the North depends upon the South for cotton clothing or the raw materials out of which to manufacture the clothing and for products of the cotton seed, and the South in turn buys many of the products of farms of the North. It follows, therefore, that when the South is prosperous it furnishes a good market for corn, flour, meat, and dairy products, and that a prosperous North makes a good demand for cotton and cotton products.

World Production.

Such a large part of the cotton crop is marketed abroad that the prosperity of the South also depends to a considerable extent upon the conditions of the foreign markets for cotton. It is important, therefore, to consider the world's supply of and demand for cotton.

The United States has been for many years the world's greatest cotton producer. India, China, Egypt, and Brazil are the most important competitive producers. Many other countries produce small amounts of cotton. (See Figs. 2 and 3.)

India.

Some cotton is grown in nearly all parts of India, but most of it grows in the western half of the country. As in the United States, there is a high degree of specialization in cot-

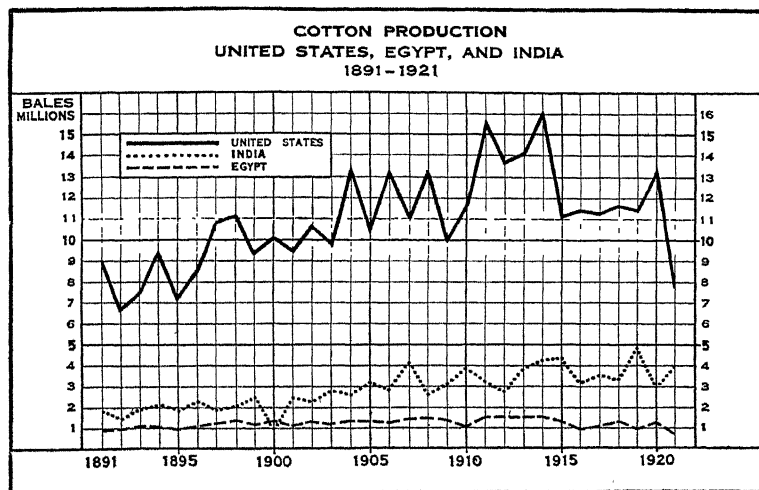


FIG. 2.—From 1891 to 1914 the cotton crops of Egypt, India, and the United States nearly doubled. The total crop of 1914 was the largest ever produced. Last year the crops in Egypt and the United States were the smallest in many years.

ton growing in some districts. The area devoted to cotton in India equals about two-thirds of the area planted in the United States, but the low yields per acre return a total crop about one-third as large. The production of India varies considerably from year to year, with a tendency to increase. The crop of 1919 was the largest yet produced. (See Fig. 2.)

Egypt.

The cultivable land in Egypt is limited to the Delta and a narrow strip along the Nile, of which nearly one-third is in cotton. The acreage is only about one-twentieth that of the United States, but large yields return a crop about one-tenth as large. The production of Egypt has declined since 1914 and in 1921 was the lowest in many years.

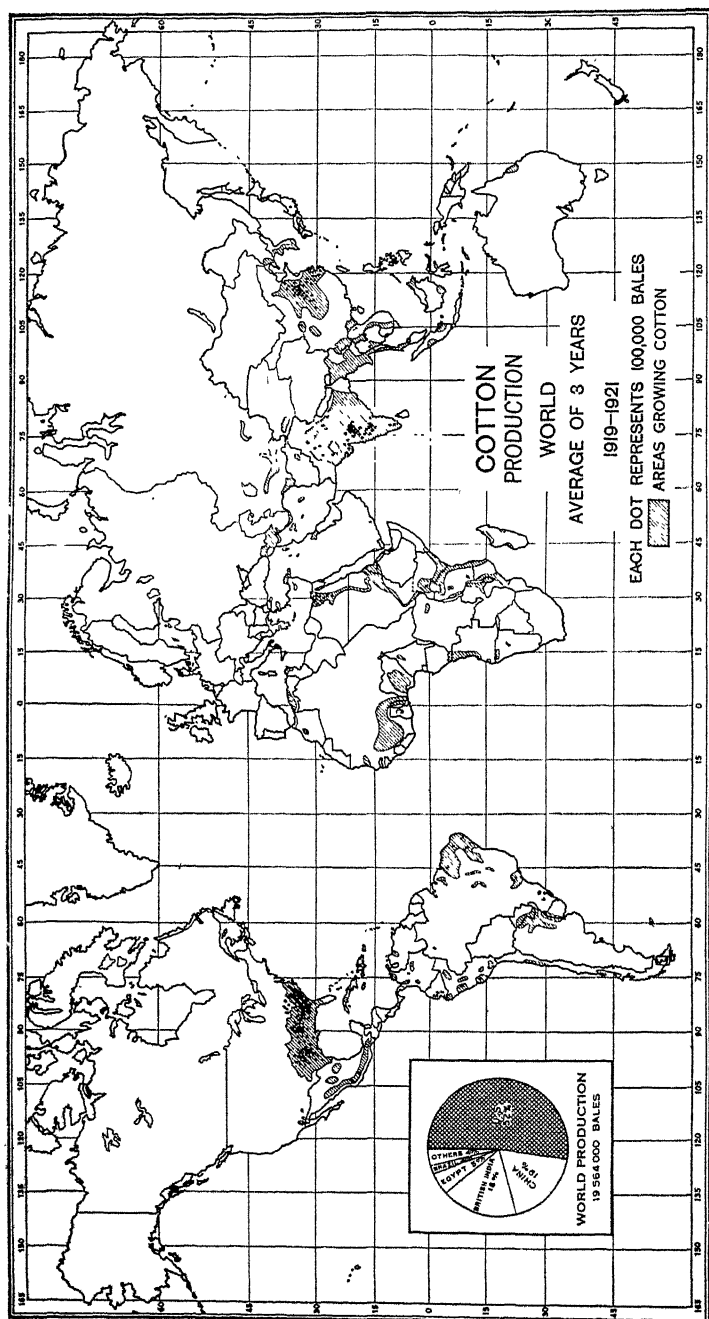


FIG. 3.—The United States produces over half of the world's cotton crop. The total crop of China is placed second by various estimates. In commercial production India is second. Cotton is grown in many parts of Africa and South America, but only in small quantities. Australia also grows a small quantity. Cotton requires a long season of warm weather for growth and proper maturity. Its latitudinal limits north and south fall between 35° and 45°, depending upon elevation and other conditions affecting the length of the frostless season.

South America:

Cotton grows as far south in South America as the twenty-eighth parallel, which includes the northern part of Argentina. Within the zone in which the plant thrives the area suitable for growing it is limited. In a large part of the zone the altitude offsets the effects of latitude and tempers the tropical climate so much as to exclude this crop. In other parts the rainfall is too heavy. Very little cotton is found in the Tropics, where the annual rainfall amounts to more than 60 inches. The chief cotton-producing regions are the drier eastern sections of Brazil and the coastal zone of Peru.

Some authorities believe that Brazil has an extensive potential area for cotton production. Quite recently production has developed rapidly in Sao Paulo, southeastern Brazil. In this region cotton must compete with the growing of coffee. Likewise an increase has occurred in the production of Argentina in recent years, but the total production of Argentina is still rather small.

China.

There are no authoritative statistics of production in China. Cotton production has developed rapidly in recent years, replacing the opium poppy in many regions. The known commercial crop exceeds 1 million bales. Since the domestic consumption is large, the total crop has been estimated to be about 4 million bales.

Principal Commercial Types of Cotton.

Wild species of cotton (*Gossypium*) are found in tropical regions of both hemispheres, and there are hundreds of cultivated varieties, differing in plant characters, as well as in the length, strength, and fineness of fiber. Thirty-eight principal commercial types are recognized at Liverpool, the chief cotton market of the world. A broad grouping into five general classes according to uses and commercial values is as follows:

(1) Sea Island cotton (*Gossypium barbadense*) is a native of tropical America. It has yellow flowers with purple spots, bolls mostly 3-locked, black seeds, fuzzy only at the ends, and very long, silky fiber. "Fancy Sea Island," grown on the islands and mainland along the coast of South Carolina, has a fiber 2 inches long, sometimes

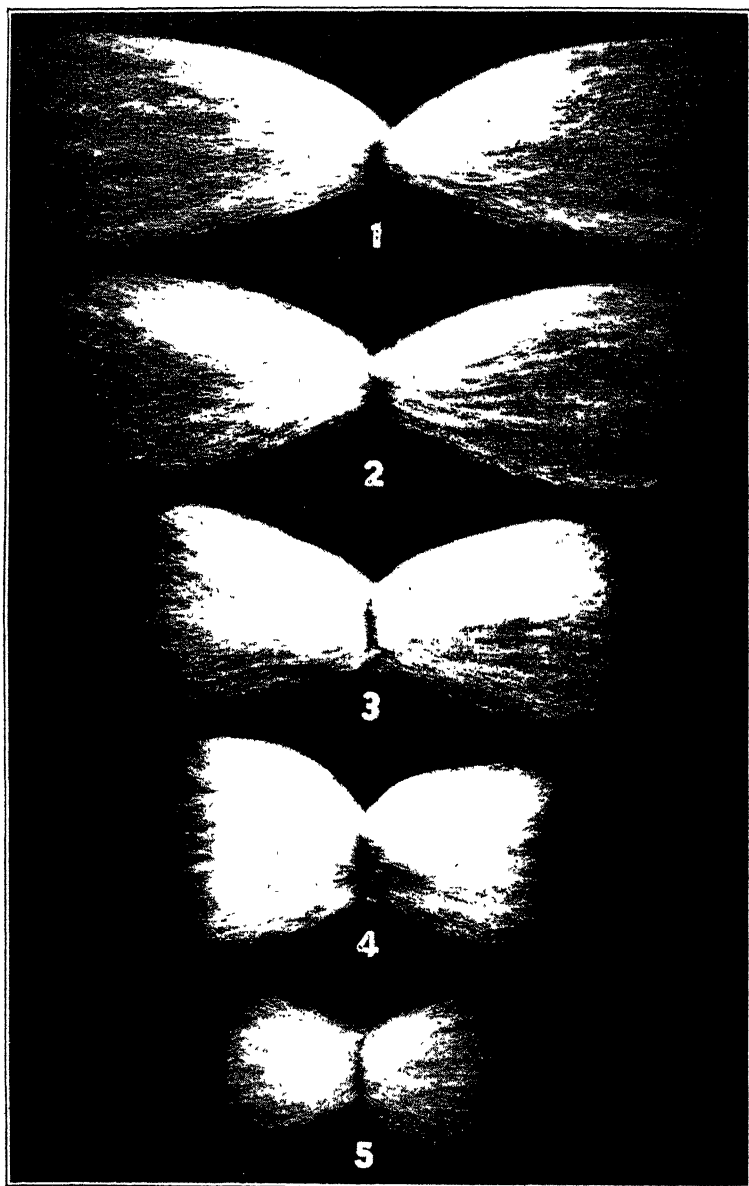


FIG. 4.—Principal commercial types of cotton. Combed lint of five important types: (1) Sea Island; (2) Egyptian; (3) upland long-staple; (4) upland short-staple; (5) Asiatic. (Natural size.)

even longer, and is the most valuable of the world's cottons, surpassing all other types in length, strength, and fineness. Most of the Sea Island crop, with a staple of $1\frac{1}{2}$ to $1\frac{3}{4}$ inches, is grown farther inland in Georgia and Florida and is known commercially as "Floridas" and "Georgias." Before the coming of the boll weevil the average yearly production of Sea Island cotton in the United States was about 90,000 running bales, of which the fancy grades represented about one-tenth. Since the invasion of the boll weevil the production of Sea Island cotton has rapidly declined, and in the last few years the crop of the United States has been a failure. In 1920 production practically ceased, the crop amounting to less than 2,000 bales, whereas in 1916 the production was about 116,000 bales. The remainder of the Sea Island crop of the world, probably amounting to 10,000 bales, is produced mostly in the West Indies, principally St. Vincent, Barbados, and St. Kitts, and in Peru. (See staple No. 1, Fig. 4.)

(2) Egyptian cotton (*Gossypium barbadense*) is similar to Sea Island in the general appearance of the plants, and has a fine, silky, strong fiber. The staple is from $1\frac{1}{8}$ to $1\frac{1}{2}$ inches long, and is second in value only to the Sea Island. Egypt furnishes the bulk of the annual crop, averaging about 1,250,000 bales of 500 pounds each, of which from 150,000 to 350,000 bales have been exported to the United States. Egyptian cotton is also produced in the irrigated valleys of Arizona and California, the first commercial planting being made in 1912, although it was experimentally grown in this country many years before that time. The American industry has rapidly grown from a production of 7,000 bales in 1916 in the Salt River Valley of Arizona to a total in both Arizona and California of about 100,000 bales in 1920. (See staple No. 2, Fig. 4.)

(3) Upland long-staple cotton (*Gossypium hirsutum*), grown chiefly in the United States, occupies a commercial position between the Egyptian and the Upland short staples. The plants resemble those of the short-staple type, having unspotted white flowers, bolls 4 or 5-locked, and seeds usually well covered with white, brown, or green fuzz, in addition to the lint. The staple ranges in length from $1\frac{1}{8}$ to $1\frac{1}{2}$ inches, and for some purposes competes with Egyptian. Most of the Upland long-staple crop of the United States is produced in the delta lands of Mississippi, in the Pecos and Red River Valleys of Texas, in Oklahoma, Arkansas, California, and South Carolina. The annual production is about 1,500,000 bales. (See staple No. 3, Fig. 4.)

(4) Upland short-staple (*Gossypium hirsutum*) constitutes about 92 per cent of the cotton crop of the United States and about 50 per cent of the world's crop of 20,000,000 bales. "American Middling," the standard short-staple grade, is the basis of price quotations for all short-staple cottons. The staple varies in length from five-eighths to 1 inch, with some varieties exceeding an inch when grown under the most favorable conditions. Hundreds of varieties are cultivated in the American Cotton Belt, differing in habits of growth, size of bolls, earliness of opening, abundance, length, and uniformity of staple. American Upland varieties have been introduced into

Russian Turkestan and Transcaucasia, and now constitute the major portion of the crop in those regions. They are also being grown in India, China, Chosen, Africa, Asia Minor, and Brazil. (See staple No. 4, Fig. 4.)

(5) Asiatic cottons include *Gossypium herbaceum* and several related botanical species, *indicum*, *neglectum*, and *arboreum*. The staple is short, often only three-eighths to three-fourths of an inch, but strong and rather rough. Asiatic cotton is grown in India, China, Asia Minor, Persia, Indo-China, and Japan, but in several districts is giving place to the American Upland type. The total volume of the crop is large but unknown, most of it being applied to domestic or local uses. (See staple No. 5, Fig. 4.)

Shifts in Cotton Production.

In the development of the United States the cotton crop has moved across the Cotton Belt from east to west. Areas have been tried out north of the areas in which cotton is now grown. Practically all possible available area for production in the United States has had a trial. Within the limits of suitable climatic conditions, production expands or contracts with changes in prices or in the profitableness of growing the crop. Shifts and changes in the distribution of the crop from 1839 to date are shown by Figures 5 to 9, inclusive.

In 1839 the cotton crop occupied only about half the area that it now occupies. Texas and the Indian territory west of Arkansas were not producing cotton. East of Texas all of the territory of the Cotton Belt had been opened to occupation by cotton planters and was being rapidly developed. The addition of large areas of new land that was well suited to the cultivation of cotton increased production so rapidly in the decade 1839-1849 that prices fell to a very low point. Notwithstanding low prices, production increased 50 per cent. Prices were better during the decade 1849-1859, and production continued to increase in all parts of the Cotton Belt, the greatest gains being made in the Southwestern States. In this decade Texas and Arkansas began to contribute to the annual crops of the United States. In this and the preceding decade, railroads were constructed from the coast to the interior in North Carolina, South Carolina, Georgia, and Alabama, increasing the transportation facilities and thereby encouraging the further development of cotton production in the interior of these States.

The blockade during the Civil War temporarily ruined the cotton industry of the South. During the war some cotton

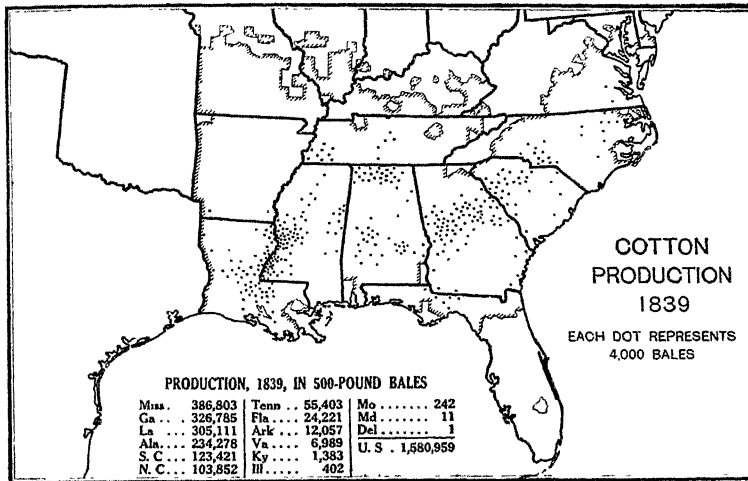


FIG. 5.—More than three-fourths of the cotton crop of 1839 was grown east of the Mississippi River. Mississippi was the leading State and Georgia next. Several counties in Illinois and Missouri reported cotton.

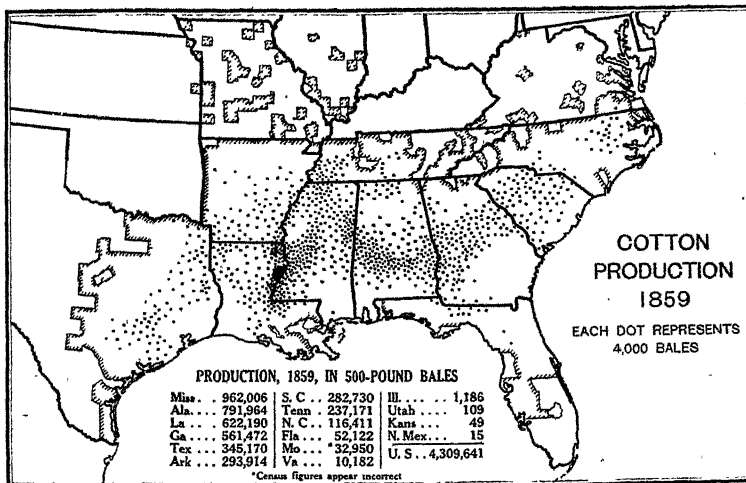


FIG. 6.—There was a great shift in area and a great increase in production between 1839 and 1859. The black prairie of Alabama and Mississippi and the alluvial lands along the Mississippi contributed largely to the increase in production. New territory was added in eastern Texas.

was produced, but for the most part agricultural activities were diverted to the production of food. In 1865 the South

was again free to return to a high degree of specialization in cotton. The recovery of production was necessarily slow.

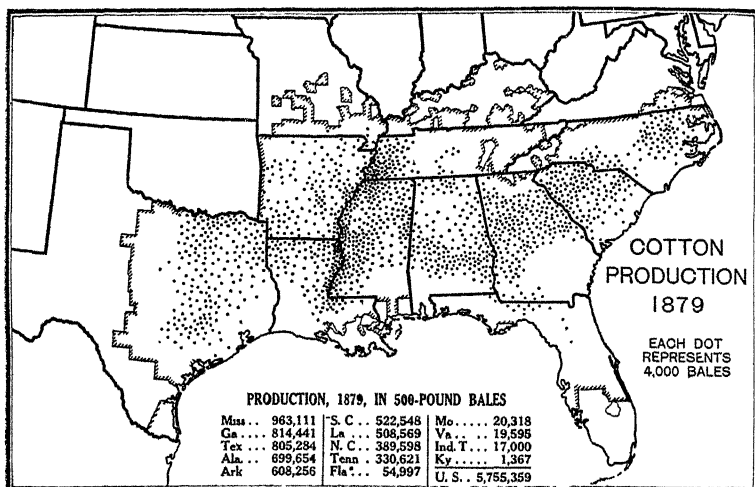


FIG. 7.—By 1879 production had practically recovered from the effects of the Civil War. It had shifted farther westward in Texas and Indian Territory. In the East the effects of the use of fertilizers on the upper Coastal Plain and Piedmont began to show in increased production.

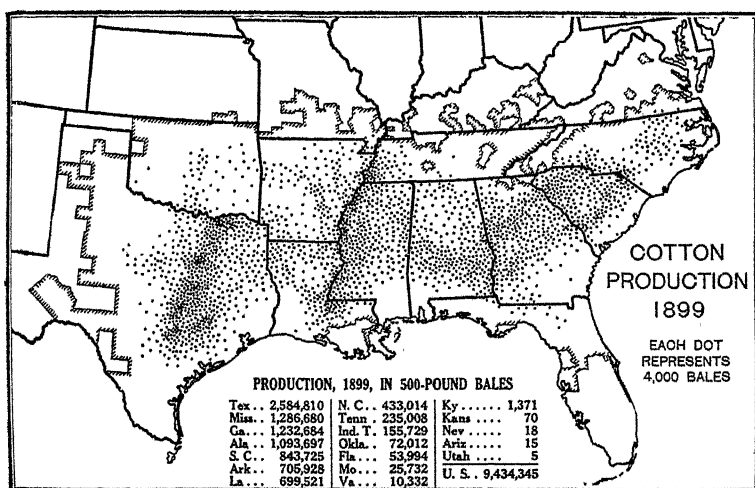


FIG. 8.—Texas trebled her crop between 1879 and 1899. In the East production continued to increase with the use of more fertilizer. At this date the boll weevil had begun to operate in Texas but had covered very little ground. (See Fig. 23.)

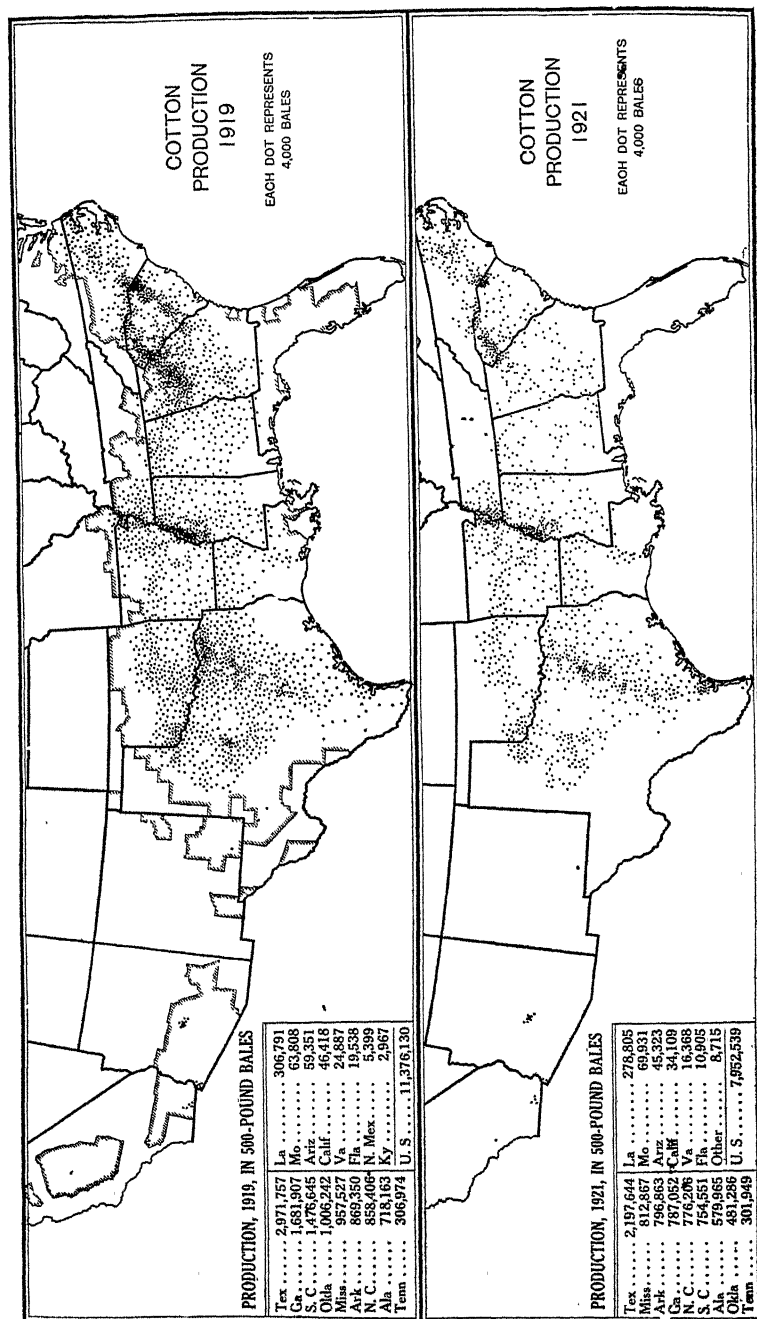


FIG. 9.—The upper part of this figure was made from census returns for 1919, the lower part from ginners' reports for 1921. The differences in the States east of New Mexico between 1899 and 1919 are largely owing to the activities of the boll weevil, which is more destructive in the southern parts of the Cotton Belt than in the northern parts. The lower map shows what parts of the Cotton Belt lost most heavily last year.

The crop of 1866 was less than 2 million bales, which was less than half that of 1859 and a little greater than the crop of 1839. High prices stimulated production by the farmers along the northern border of the Cotton Belt and in Arkansas and Texas. It was not so difficult to reorganize agricultural activities where the farms were small and worked largely by white labor as it was to reorganize the large plantations which had been worked by slave labor. By 1879 conditions in the South were fairly stable again, and the crop of that year was the largest that had ever been produced. All the States, except Alabama and Louisiana, produced more cotton in 1879 than in 1859.

Production doubled between 1879 and 1898. In the West the increase in production was largely from new lands. The expansion of railroads in Texas was followed by the rapid development of cotton production in the Black Waxy Prairie region, grazing and grain farming giving way to cotton. Production in Arkansas and Oklahoma had also increased greatly. In the East there was an increase in production, largely as the result of the extensive use of fertilizer on sandy soils and of improvements in methods of production.

The development of Oklahoma and western Texas added a large acreage to the cotton-producing area between 1899 and 1909. The total acreage increased 32 per cent in the decade and continued to increase up to 1914. This period is marked by the spread of the boll weevil, by the intensification of efforts to produce higher yields and better qualities, by the introduction of cotton into the irrigated districts of southern California and Arizona, by the great increase in the value of cotton seed, by the rapid development of cotton manufacturing in the South, and by increased competition from foreign countries.

Since 1914 production of cotton has been reduced considerably by the ravages of the boll weevil. The crop of 1919 was only a little larger than the crop of 1909, which was a short crop for that period. The crop of 1921 was greatly reduced by the boll weevil and was the shortest crop that has been produced since 1895. It may be noted that the heaviest reductions were made in the regions most recently infested by the boll weevil. (Compare Figs. 9 and 23.)

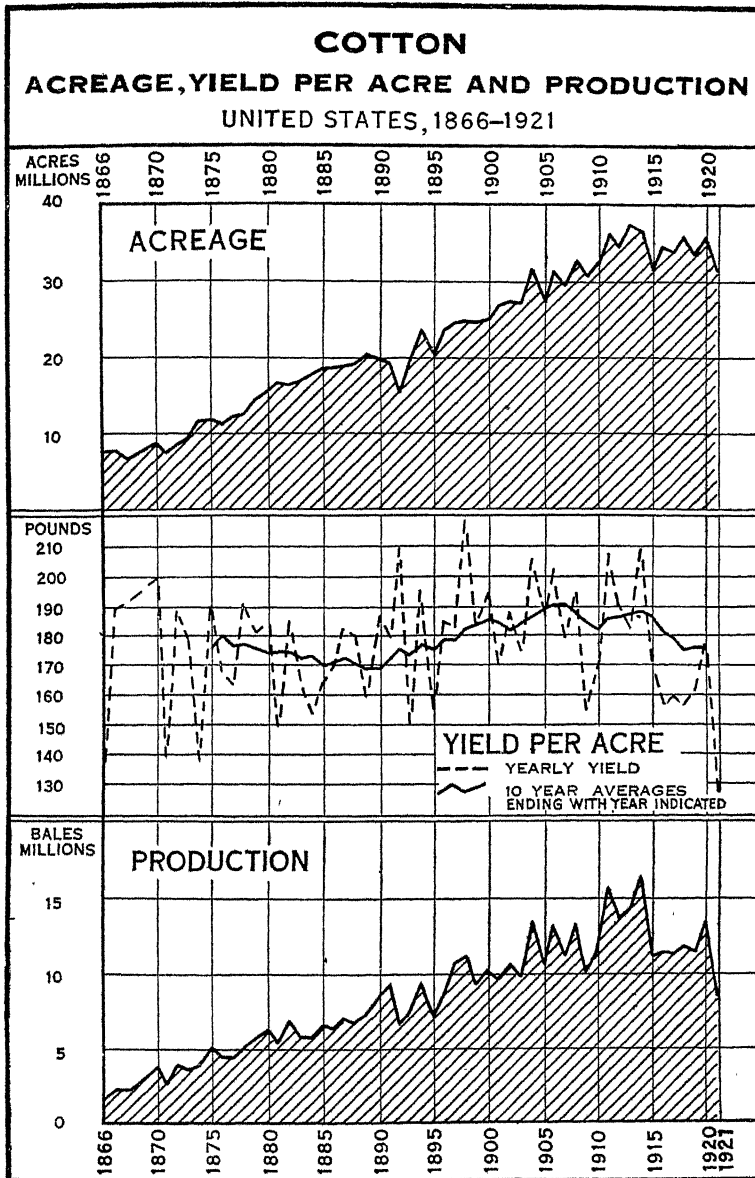


FIG. 10.—The acreage of cotton expanded rapidly from 1866 to 1913. The trend since 1913 has been downward. The yield per acre varies greatly from year to year, the trend was upward from 1890 to 1907 and has been downward since the latter date, and last year was the lowest recorded. The crop of last year was the smallest since 1895.

Acreage, Yield, and Production.

Beginning with the earliest date for which acreage data are available, the area of cotton harvested has quadrupled. The very rapid increase from 1866 to 1880 was a process of recovering after the Civil War. The rapid expansion from 1893 to 1911 was for the most part an expansion westward in Texas and Oklahoma. In recent years a tendency seems to be developing to maintain a level or possibly to reduce the area in cotton. The ravages of the boll weevil have caused reductions in acreage in the worst infested areas. These reductions have been offset by expansion of cultivated areas in which the weevil has been less destructive.

Yields per acre fluctuate greatly from year to year. The average for 1921 was the lowest of which there is a record. The trend of yields was downward to 1890, after which it was upward for 16 years, and is again downward. Three major factors in the trend of yields are shifts in area, fertilizers, and boll weevil. The downward trend in the first period noted was due largely to expanding low-yielding areas, the upward tendency, developed later, was due largely to increased use of fertilizers in some States, and the later downward tendency is caused primarily by the activities of the boll weevil.

Production fluctuates with yields and follows a composite trend between acreage and yield. Unusually large areas planted from 1910 to 1914 and good yields produced very large crops, the crop of 1914 being the largest ever produced. Since 1914 the crops have averaged about the same as for the period 1904-1909, and last year's crop was the smallest produced since 1895.

Diversification of Crops in the South.

The averages of crops in the South as reported by the censuses of 1880-1921, inclusive, show no decided tendency toward diversification until the last decade. Several new crops have come into the South in this period and now occupy considerable areas. The area sown to rice has increased over 50 per cent but is still a small percentage of the total cultivated area. In recent years peanut growing has developed some importance. Soy beans and cowpeas are comparatively

new crops in the South. Kafir and milo are new crops in Oklahoma and Texas. The total acreage of all these new crops compared with the total acreage of cotton or corn is not very great, but together with all other crops they now make up about one-third of the total crop area.

Changes in acreages of selected crops in the cotton-growing States, 1879-1919.

	Number of acres, 000 omitted.					Per cent of total acreage of principal crops.				
	1919	1909	1899	1889	1879	1919	1909	1899	1889	1879
Rice.....	779	610	342	161	174	0.8	0.7	0.5	0.3	0.4
Kafir, milo, maize, etc.....	2,635	1,108	86	.....	.....	2.7	1.4	.1	.....	.....
Hay—tame or wild grasses....	4,360	3,518	1,950	1,543	454	4.5	4.4	3.0	3.2	1.1
Annual legumes— hay.....	1,339	.....	.....	.....	.....	1.4	.....	.....	.....	.....
Sorghum kafir— forage.....	2,566	1,148	749	.....	.....	2.7	1.4	1.1	.....	.....
Peanuts.....	913	724	398	143	.....	.9	.9	.6	.3	.....
Total.....	12,592	7,108	3,525	1,847	628	13.1	8.8	5.3	3.9	1.6

Locally marked changes have taken place in the relative acreages of the different crops. The destructive activities of the boll weevil have been an important factor in bringing about these changes. The acreage of cotton in Georgia in 1919 was considerably below the acreage of 1909. The reduction in cotton acreage here was offset largely by an increase in the acreage of corn. There was a considerable increase in the acreage of hay, especially

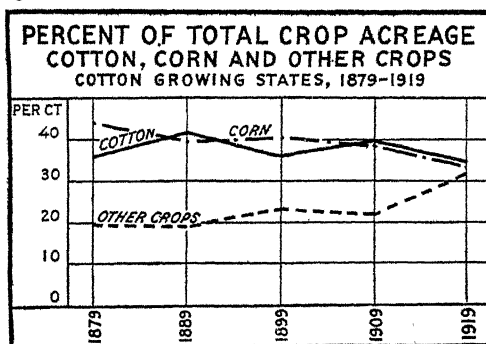


FIG. 11.—From 1909 to 1919 the percentage of land cultivated in crops other than corn and cotton in the Southern States increased considerably.

legume hay, otherwise there were no very significant changes. Similar but even more striking changes have taken place in Mississippi. In a few States cotton has increased in importance, offsetting, in a measure, the decline in the relative importance of cotton in the States which have been seriously affected by the boll weevil.

In the last year, 1921, there seemed to be every reason for reducing the acreage planted to cotton and increasing the acreage planted to corn. According to the latest estimate,

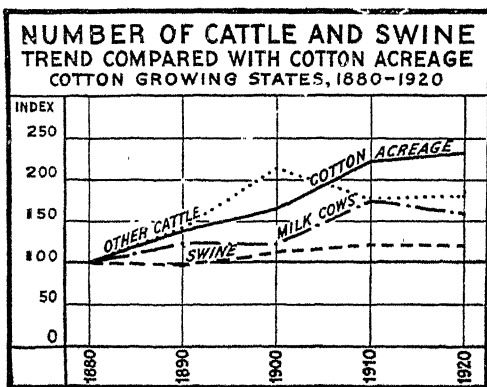


FIG. 12.— Census returns of live stock are not strictly comparable from date to date. The figures available indicate that live stock has not increased as rapidly as the acreage of cotton.

swinging from corn to cotton and from cotton to corn, maintaining a relation of about 50 to 50 between them.

The number of live stock in the cotton-producing States has increased in the last 50 years, but not as rapidly as has the area planted to cotton. The number of cattle doubled and the number of swine increased about 25 per cent. The increase in live stock is supported by the increase in tame grass and legume hay. It is difficult to compare exactly the last two censuses. The change in number between the last two decades seems disappointing to one who believes that the South would profit by keeping more live stock.

The Cotton Belt.

The term "Cotton Belt" as it is generally used applies to that area of specialized cotton production in the South extending from the Atlantic coast through North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi,

the result was a reduction of the cotton crop for 1921 to approximately the acreage for 1915, a total reduction from 1920 of about 10 per cent. The high freight rates on corn from the North encouraged the increase in corn production. For a long time we have had this

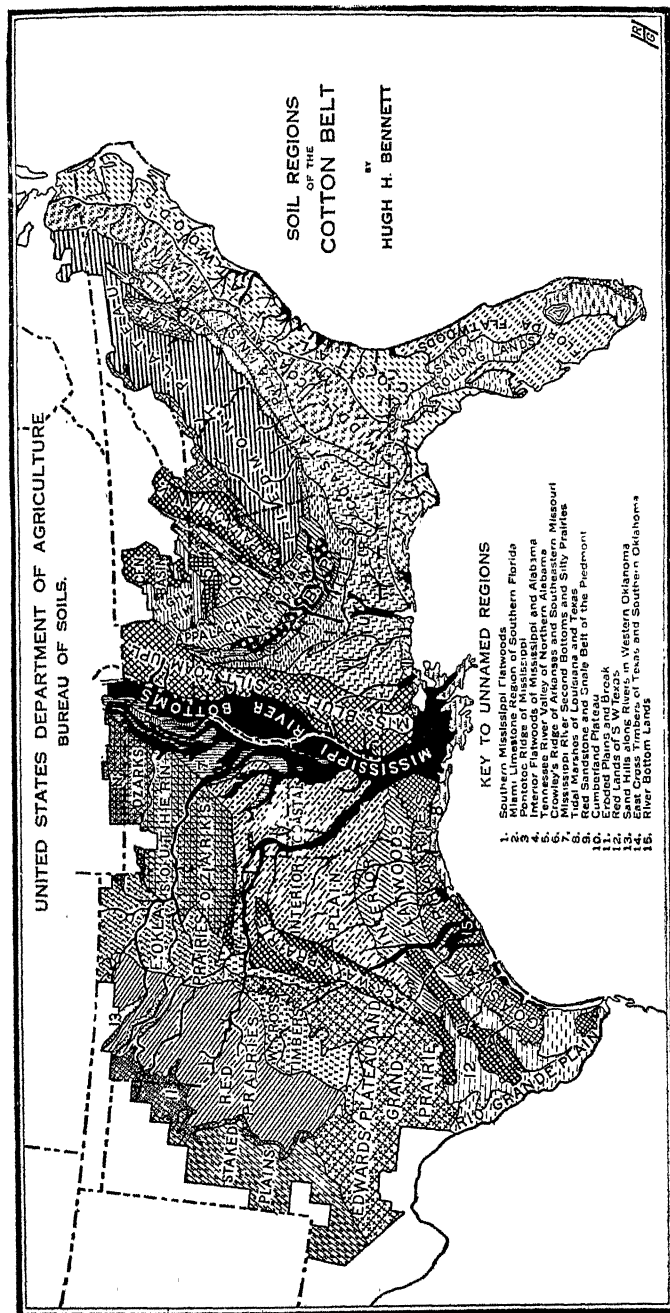


FIG. 13.—Excepting in southern Florida, only cotton-growing counties of some importance are included. Compare Figures 13 and 9 and note the distribution of cotton production in relation to soils. The most productive soils are the bottoms of the Mississippi and tributary rivers, the black prairies of Alabama, Mississippi, and Texas. Fertilizer makes the upper Coastal Plain and the Piedmont Plateau of Atlantic Coast States very productive.

Arkansas, western Tennessee, and northern Louisiana, and into Texas and Oklahoma. The densest production of cotton is found on the soils most suitable for its production in the center of this belt. (Figs. 9 and 13.) Both soil and climate are very important factors in the determination of areas suitable for cotton production.

About two-thirds of the Cotton Belt consists of a broad coastal plain, composed principally of sedimentary materials, bordering and largely derived from two ancient and much-eroded mountain masses, the Appalachian Highlands (including the Piedmont) in the east and the Ozark Highlands in the west. From these highland areas rivers radiate across the coastal plain, bordered, especially along their lower courses, by swampy flood plains often several miles wide; and in the broad depression between these two highlands the Mississippi River flows southward, dividing the Cotton Belt into an eastern and western section approximately equal in area, in acreage of improved land, and in production of cotton. Beyond the boundary of the coastal plain the Cotton Belt includes northern and western marginal regions, comprising a portion of the Piedmont Plateau and of the valleys associated with the Cumberland Plateau and Blue Ridge Mountains in the east, together with the valleys of the southern Ozarks (Ouachita and Boston Mountains) and a portion of the prairies and great plains of Texas and Oklahoma in the west.

Soils of the Cotton Belt.

Cotton is grown on practically all well-drained types of soil in the Cotton Belt, but a comparison of the map showing distribution of production with the map showing soils brings out the fact that certain types of soil seem to be much more suitable for cotton production than other types. (See Figs. 9, 13.) The most productive soils in a normal season are the dark-colored clay lands, particularly those rich in lime, such as the black prairies of Alabama, Mississippi, and Texas, and the red, brown, and black well-drained river bottom land and the second bottoms such as are found in the Mississippi, Tennessee, and Arkansas. The sandy loams of the Coastal Plain and the red subsoil Piedmont lands, when fertilized, also give high yields of cotton. The use of fertilizer permits the growing of cotton on light sandy land which would other-

wise give yields too low to be profitable. The red prairie of Texas and Oklahoma east Oklahoma prairie and that part of the Grand Prairie and Edwards Plateau of Texas are also productive soils, but in western Oklahoma and Texas the yields of the crops are frequently reduced by drought. (For detailed description of the soils shown on the map on page 339, see *Atlas of American Agriculture*, cotton section.)

Climate of the Cotton Belt.¹

Although the most noticeable differences in the density of cotton acreage and variations in yield per acre within the Cotton Belt are due principally to soil conditions, the outer boundaries of cotton production are determined almost entirely by climatic factors. The Cotton Belt has an average summer temperature of 77 degrees along the northern boundary. This temperature appears to be the limit, beyond which commercial production becomes unprofitable. In the southern portion of the Cotton Belt the summer temperature is 80 to 85 degrees. Along the northern margin of the Cotton Belt the last killing frost in spring occurs on an average about April 10, and the first killing frost in fall about October 25, so that the frostless season is about 200 days. In the southern portion of the Cotton Belt the last killing frost in spring occurs about March 10 on the average, and the first killing frost in fall seldom before November 25, the frostless season being 260 days or more in length.

The average annual precipitation in the Cotton Belt ranges from 23 inches in western Oklahoma and Texas to 55 inches in eastern North Carolina and 60 inches in southern Mississippi, but throughout much of the belt is between 30 and 50 inches. The spring rainfall ranges from 6 inches in western Texas to 16 inches in Arkansas and southern Mississippi, being heavier in the Mississippi Valley States than in Texas or the South Atlantic States. The summer rainfall is somewhat greater than that of the other seasons, especially in the southern and eastern portion of the belt, reaching a maximum of 20 inches in southern Mississippi and in eastern North and South Carolina, while in the black prairie region of central Texas the amount received averages only 8 inches. Autumn is the driest season of the year, practically all the

¹ Taken from the "Cotton" section of the *Atlas of American Agriculture*, page 9.

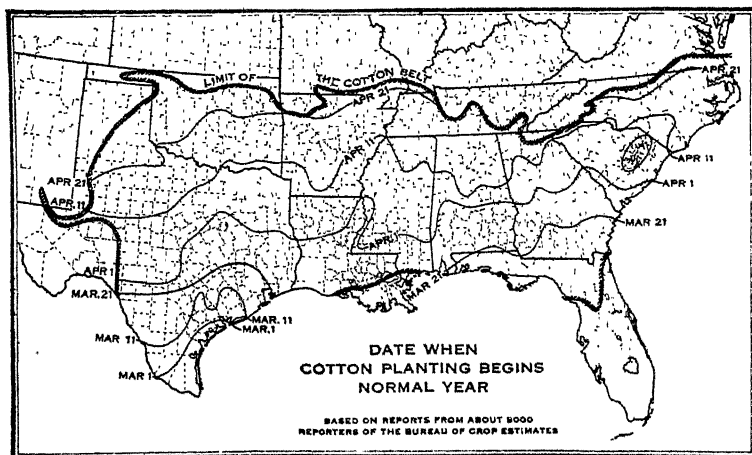


FIG. 14.—In southern Texas planting begins about March 1, and the date becomes later going north to the northern border of the Cotton Belt, where it begins about April 21. The planting of cotton begins generally about 10 to 20 days after the last killing frost in spring.

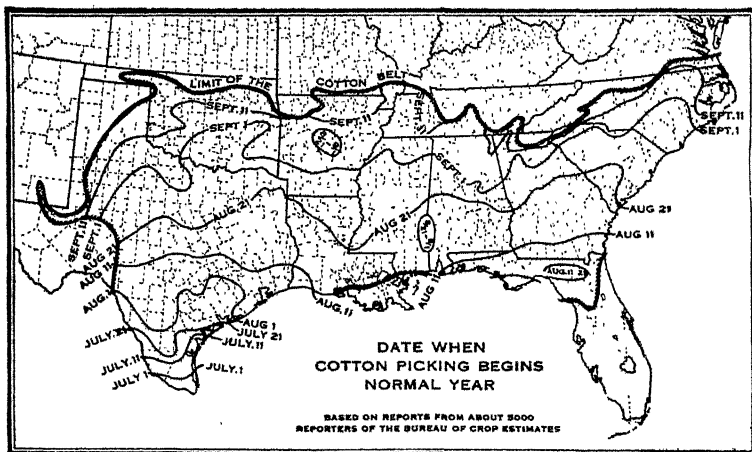


FIG. 15.—Cotton picking begins early in July in southern Texas. Through the center of the Cotton Belt it begins in the latter part of August and along the northern border not until about September 11. The southern part of the Cotton Belt has a long picking season, but along the northern border the cotton must be picked as early as possible to escape the frost.

important cotton regions receiving less than 10 inches of rain during the fall months. February and November are the wettest months in the Mississippi Valley States, in Alabama, and in northern Georgia. August is the wettest month in the Carolinas and May in Texas and Oklahoma. October and November are the driest months throughout practically the entire Cotton Belt.

Crop Combinations in the Cotton Belt.

The high degree of specialization in cotton production in the Cotton Belt is in part explained by three things: First, the world demand for cotton is great, and the areas having especially favorable climate and other conditions are restricted. Second, cotton provides rather steady employment for labor from early in the spring to a little beyond the middle of the summer and from early fall to early winter. In fact, it provides so fully for the employment of labor throughout the season that a cotton farmer usually chooses his other crops more with a view to making the business and home partly self-sufficing than he does with a view to providing profitable employment for labor at times when cotton does not require attention. (See Fig. 18, seasonal distribution of labor.) Third, cotton is marketed direct—that is, it is not disposed of through live stock. If it were a crop to be fed, a farmer would in all probability need to give more attention than he does to the production of other crops which would be supplementary from the standpoint of caring for live stock. As it is, he produces forage and grain crops mainly for a few head of work stock. Considering these things, it is not surprising that cotton farmers are not inclined to produce more corn, sorghum, oats, cowpeas, peanuts, sweet potatoes, etc., than they themselves can make good use of in the course of producing and marketing cotton.

The accompanying map (Fig. 16) shows the Cotton Belt divided north and south and east and west on the basis of certain differences in the choice of crops grown with cotton. The line drawn north and south through Oklahoma and Texas indicates where corn begins rather definitely to give way to kafir and other grain sorghums. But for the dryness of the climate to the west of this line, corn would hold its place on cotton farms throughout the Cotton Belt.

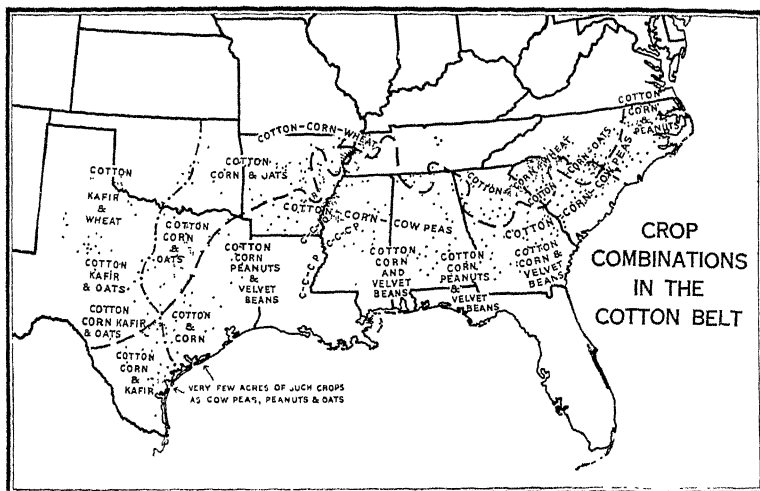


FIG. 16.—North of the line drawn through the Cotton Belt from Virginia on the east down through the Southern States and extending to the Mexican border on the west wheat and other small grains appear in the cropping system. South of this line small grains do not appear, their place being taken by leguminous crops. Another line drawn from the Kansas border across Oklahoma and Texas separates the kafr-producing area from the corn-producing area.

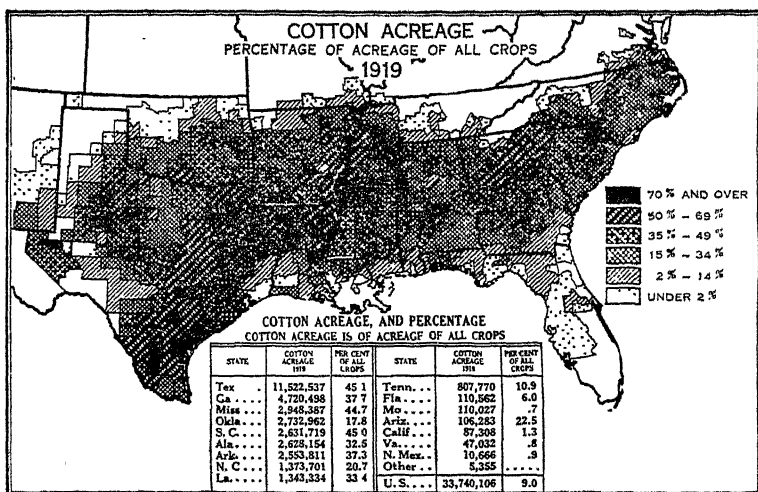


FIG. 17.—Considering State totals, the greatest specialization in cotton is in Texas, with South Carolina second and Mississippi third. In several areas over 70 per cent of all the land in crops is in cotton. The largest area of this kind is along the Mississippi River in Mississippi and Arkansas.

North of the line running east and west through the Cotton Belt the acreage of small grains (wheat, rye, etc.) exceeds the acreage of large-seeded annual legumes (cowpeas, peanuts, velvet beans, etc.). South of the line the acreage of large-seeded annual legumes exceeds the acreage of small grains. The choice of the small grains in the northern division of the Cotton Belt tends to be wheat to the north and oats to the south. The oats are sown in the autumn instead of the spring as in the North. In the southern division of the belt, where crops like cowpeas, peanuts, and velvet beans are more

SEASONAL DISTRIBUTION OF MAN LABOR ON CROPS 5 COUNTIES IN CENTRAL ALABAMA

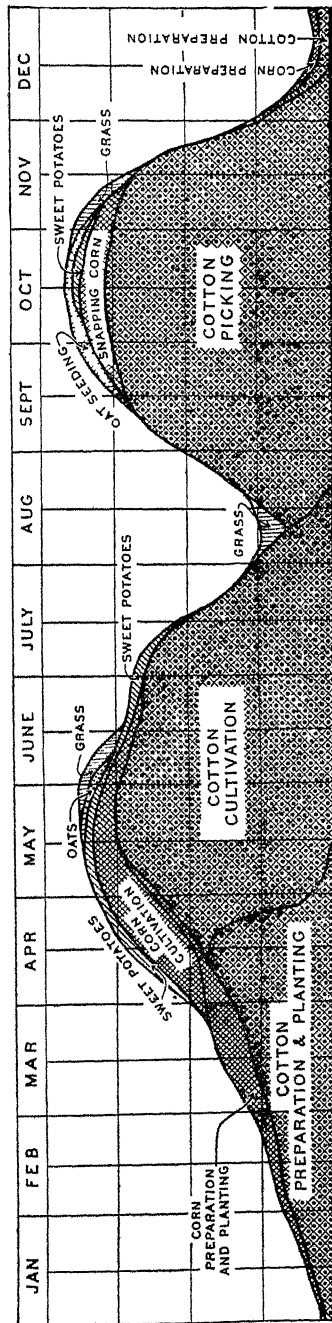


Fig. 18.—The periods of slack work come in midsummer—July and August—and in midwinter—December and January. No crops are grown on which labor can be utilized during these periods of slack work. Of course, in the farthest South winter vegetables can be grown in the slack winter period. Some grass harvest comes in August, but it is not important. The picking season is the limiting period for labor on cotton. At the same time corn should be snapped, oats should be harvested, sweet potatoes dug, and grass harvested. It is not surprising, therefore, that where cotton is a very profitable crop these other crops may not receive much attention.

important, oats are practically the only small grain grown. This lower part of the Cotton Belt lies almost wholly within the Coastal Plain, where climatic conditions generally are less favorable to the production of small grains than they are farther north.

The choice of the large-seeded annual legumes in the southern division of the Cotton Belt tends to be cowpeas in the Mississippi River bottoms and to the east along the upper part of the Coastal Plains, peanuts and velvet beans elsewhere between eastern Texas and southeastern Georgia, and peanuts alone in northeastern North Carolina and southeastern Virginia. The share of land allotted to these crops in the Coastal Plains of southern Texas is almost negligible. In the northern division of the Cotton Belt, where the small grains are more important, a little land is allotted to cowpeas and peanuts, but very little to velvet beans.

General Farm Practices:

Time and method of preparing land, of planting, cultivating, picking the cotton, and the cost of preparing it for market vary much in different parts of the South. Probably in most cases the causes of the differences are not to be found only in the different customs; there are also physical and economic reasons for the differences.



FIG. 19.—One mule plow in Southeast

Wherever crab grass, Johnson grass, and other weeds grow profusely in the fields the cultivation of cotton requires from one to three hoeings per season. With one mule a man can plow, chop, and hoe from 10 to 20 acres, from which 5 to 10 bales of cotton are produced, and this is ordinarily all one family can pick. Therefore, one-mule implements are used over the greater portion of the eastern part of the Cotton Belt. In some sections the topography of the land would make the use of larger implements difficult. In the level, black lands of Texas, however, where,



FIG. 20.—Two-mule plow in Texas.

owing to the smaller amount or absence of crab grass, the hoe work is comparatively small and where transient labor can be obtained to pick the cotton, 4-mule implements are frequently used in preparing the land and 2-mule implements in cultivating it.

The newest form of cotton cultivation in the United States has developed in the irrigated districts of the Southwest. Here the essentially distinctive features are leveling the land so that the entire field may be irrigated uni-

formly and regulating the water so as to produce the desired results in producing the cotton. Another special kind of culture is used in producing the sea-island cotton of South Carolina and Georgia.

Fertilizers.

Commercial fertilizers are extensively used in the production of cotton in the Southeastern States. (See Fig. 21.) Comparing Figure 21 with Figure 13, the heaviest use of fertilizers is seen to be on the soils of the Coastal Plains of

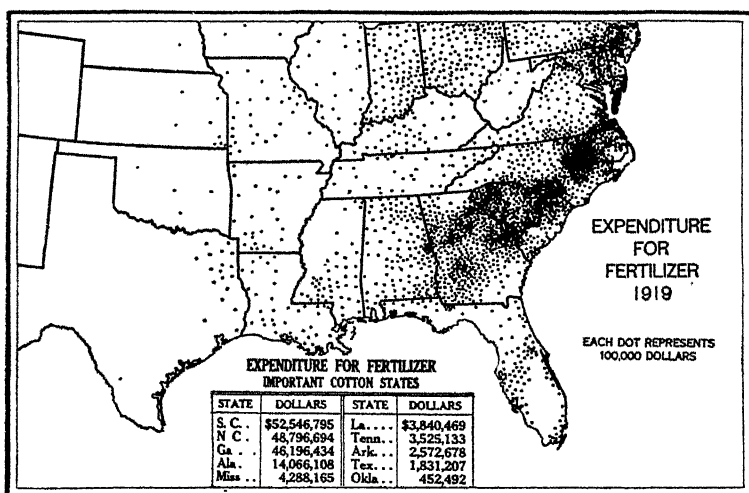


FIG. 21.—Distribution of the expenditure for fertilizers as reported by the census of 1919. The heaviest use of fertilizers is on the Coastal Plain and Piedmont of the Carolinas and Georgia. Very little is used west of Alabama. Compare the distribution of expenditures for fertilizers with distribution of cotton production (Fig. 9).

North Carolina, South Carolina, and Georgia, and also to a considerable extent upon the soils of the Piedmont of these States.

The fertilizers most generally used consist of acid phosphate, kainit, muriate of potash, and nitrate of soda. In many regions the greatest outlay of cash in producing the crop is for the fertilizers. After labor, it is the most important factor in the cost of producing cotton in these Eastern States.

Cotton Pests.

The Boll Weevil.

The original home of the boll weevil appears to be the plateau region of Mexico or Central America. Previous to 1892 the insect had spread through much of Mexico. Little is known, however, concerning the extent or rapidity of dispersion. About 1892 the weevil crossed the Rio Grande near Brownsville, Tex. Whether it flew across or was transported in some way is not known. By 1894 it had spread to

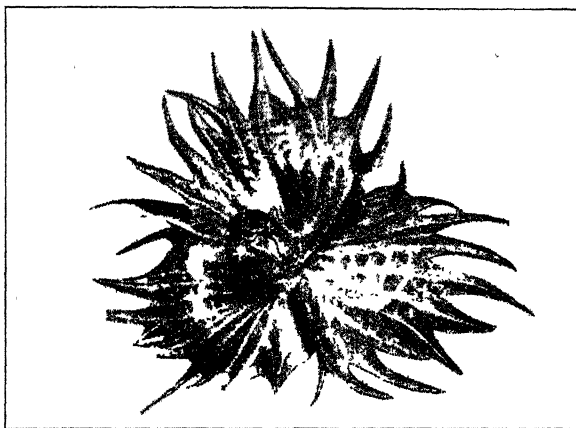


FIG.. 22.—Cotton boll weevil. Puncturing young flower bud. (Natural size.)

half a dozen counties in southern Texas. Since 1894 it has extended its range annually from 40 to 160 miles, although in several instances the winter conditions have been such as to cause a decrease in the infested area. (See Fig. 23.)

Outside of the United States the boll weevil is known to occur throughout the larger portion of Mexico and southward to Guatemala and Costa Rica. It is known to occur also in the eastern half of Cuba.

In the newly invaded region of the Cotton Belt the loss from boll-weevil damage may run as high as 50 per cent or more of the crop and invariably creates a condition bordering on panic among cotton planters. Under such conditions diversified farming and animal husbandry receive a powerful impetus. As time passes, however, and the planters learn the proper methods of raising cotton under boll-weevil con-

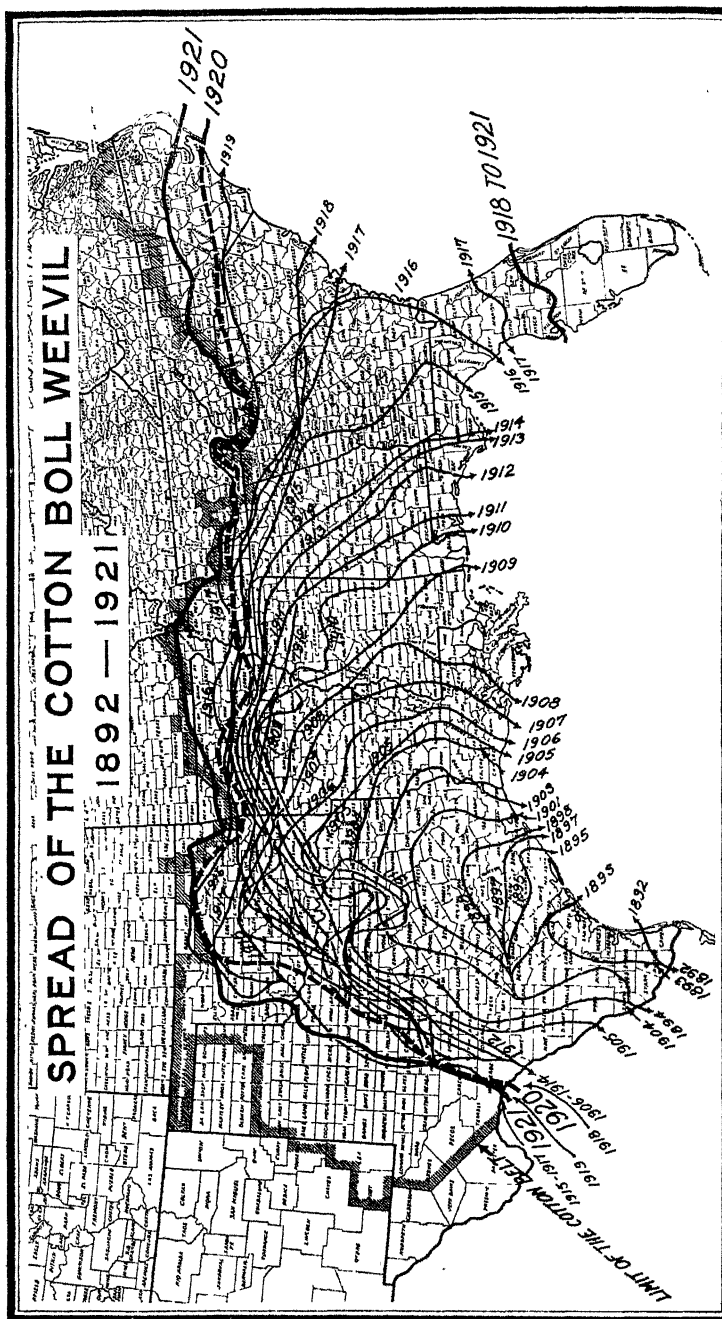


FIG. 23.—In 1892 the boll weevil crossed the Rio Grande from Mexico and occupied an insignificant area in the extreme southern tip of Texas. Note this area, indicated by the short line and the figures 1892. The map shows the subsequent spread of the weevil year by year.

ditions, a considerable reduction of the loss incident to the presence of the weevil is apparent.

The actual damage done by the boll weevil varies greatly from year to year. A very mild winter is invariably followed by a heavy weevil infestation during the following summer. Excessive rainfall during the summer months is also conducive to greater weevil activity. In prairie regions where the insect obtains little or no protection through the winter, it never becomes so numerous as in other quarters where conditions favorable for hibernation are found. The Bureau of Crop Estimates of this department in the fall of 1920 estimated the average annual loss for the last four years to be about \$300,000,000.

Hibernation takes place in the adult stage. After frost in the fall the last surviving generation of adults seek such shelter as may be found under old cotton stalks and dead grass, or in near-by woods. In regions where Spanish moss is abundant, this material provides a favorite place for the weevil to pass the winter. An average of about 6 per cent of the weevils entering hibernation in the fall survive the winter. A very cold winter will reduce the number that will survive, and a very mild winter will augment it. In the spring the survivors emerge from hibernation, breed, and thus start another generation. Several generations are produced each year, each much more numerous than the last preceding. The period from generation to generation is about 25 days.

The boll weevil can not be eradicated, but certain measures may be taken which, under ordinary circumstances, will control it to the extent that a profitable crop of cotton may be raised.

During comparatively recent years a system of boll-weevil control by the use of calcium arsenate in dry-dust form has been developed. It has been thoroughly tested for the last seven years and has proved to be fairly successful. Specialized treatment of the plants with this arsenical is necessary for successful control. Publications giving details of this treatment are issued by the Bureau of Entomology.

In addition to the use of poison, certain other measures may be taken to reduce weevil damage. Fall destruction of the

cotton plants, either by burning or by plowing under, destroys the possible hibernating places of the weevil in the fields. If it can be done before the first killing frost great numbers of weevils will be destroyed.

The use of an early maturing variety of cotton is important. Likewise the seed should be planted as early in the spring as possible without risk of damage from frost. The object of this is to get the crop well along before the weevils

have become numerous enough to be destructive.

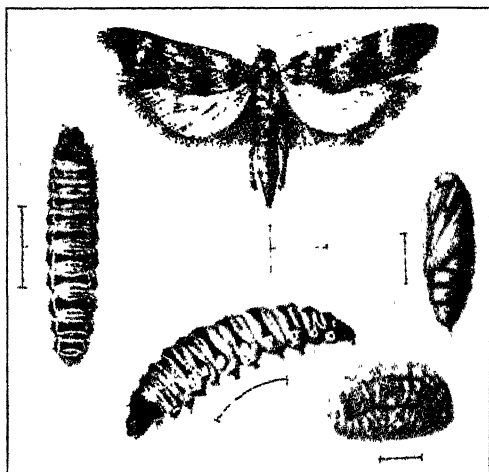


FIG. 24.—Pink bollworm. Adult, larva, pupa, and egg. (Enlarged.)

The Pink Bollworm

The pink bollworm has been known in other countries as a destructive cotton pest since the year 1842, at which time an English entomologist called attention to its depredations

in India. It was first noted in Egypt in 1911. In the same year the pest was introduced into Mexico, evidently in two importations of cotton seed from Egypt. The fact of its establishment in Mexico did not become known to our authorities until 1916. An embargo upon Mexican cotton seed was declared immediately, but prior to this order large quantities of seed were shipped to certain oil mills in Texas for grinding. On September 10, 1917, the first infestation on American soil was found in a cotton field at Hearne, Tex.

The Hearne district was then made a cotton-free zone—that is, no cotton was grown in the district—and was so maintained for three years. This district is now believed to be entirely free from the pest, demonstrating what may be accomplished where adequate control is maintained for a

period of years. Other areas that have been found infested are indicated on the map (Fig. 25).

The damage which might result from the uncontrolled infestation of the Cotton Belt of the United States by the pink bollworm can be estimated only by the damage done elsewhere, as so far none of the outbreaks in this country have been allowed to go entirely uncontrolled. In November, 1920, a commission organized by the Texas Chamber of Commerce, after a careful investigation in the Laguna district of Mexico, where the insect has been allowed to run its natural course, submitted a report indicating a loss of at

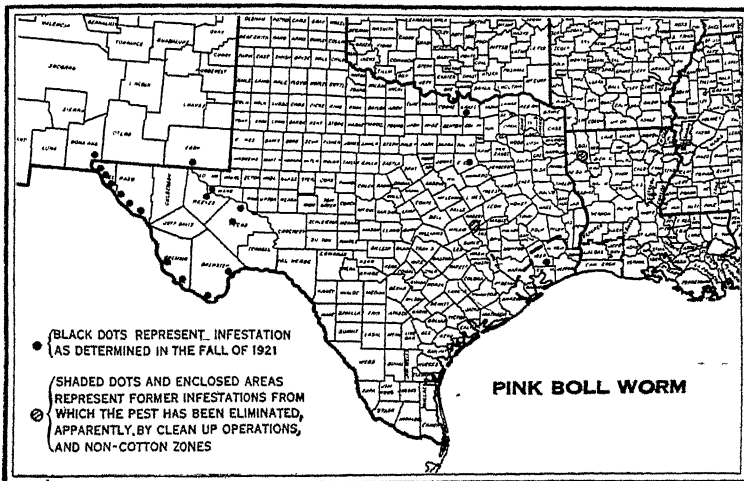


FIG. 25.—The pink bollworm was discovered in certain very limited areas in Texas in 1917 and in Louisiana during the winter of 1919–20. The pest has apparently been stamped out in Louisiana, and the actual infestation in Texas is greatly reduced.

least 50 per cent of the cotton crop of 1920 of that district due to the pink bollworm. As a matter of fact the pink bollworm is probably the most serious single cotton pest of the world. Its potential danger is greatly enhanced by the habit of the insect in the larval stage of entering the cotton seed and remaining there for several months of the year. By reason of this habit the pest is easily transported to any part of the globe where cotton seed is carried.

The only chance of exterminating this pest is by the enforcement for a period of years of noncotton zones for the

invaded areas, and any attempt at control which permits the continuation of the growth of cotton in such areas will be followed by the inevitable increase of the pest and its ultimate spread throughout the South. Perhaps the most determined fight which any nation has ever waged for the eradication of a single insect species within its borders has been carried on since the discovery of the pink bollworm in Texas, and the end is not yet.

The Cotton Bollworm.

Some doubt exists whether the cotton bollworm is a native species or came originally from some other country. At any rate, long before the advent of the boll weevil, it was one of the oldest, most widely distributed, and most destructive of injurious insects. It is a general feeder, attacking a great many wild and cultivated plants other than cotton.

A number of years ago the annual loss to the cotton crop caused by this pest was estimated at \$8,500,000. The damage, however, is somewhat sporadic, being worse in some years than in others, and is likely to be very uneven over the Cotton Belt in any one year.

The insect passes the winter in the soil in one of the immature stages. Fall or winter plowing is therefore advantageous in its control. In fact the same methods of control advocated for the boll weevil are applicable to this species. If calcium arsenate is used for the weevil, this should be sufficient for the control of the bollworm.

The Cotton Leafworm.

The cotton leafworm has been known to cotton planters in the United States since 1793. It is unique in that it does not spend the winter in this country. It is a native of tropical regions south of the United States, and in some years does not appear here in destructive numbers. At other times the adult moths fly northward, reaching our Cotton Belt fairly early in the season, and there lay eggs for another generation. This soon appears as the familiar defoliating worm. At the end of the season, when cold weather sets in, all stages of the insect within our borders succumb to climatic conditions.

The species is easily controlled by the application of calcium arsenate as for the boll weevil.

Cotton Diseases in the United States.

Several important diseases attack the cotton crop and cause losses which in 1920 were estimated by the Plant Disease Survey of the United States Department of Agriculture at over 13 per cent of the total production.

Cotton Wilt.

Cotton wilt is a disease which causes stunting, wilting, and death of the entire plant. It is due to a fungus, *Fusarium*,

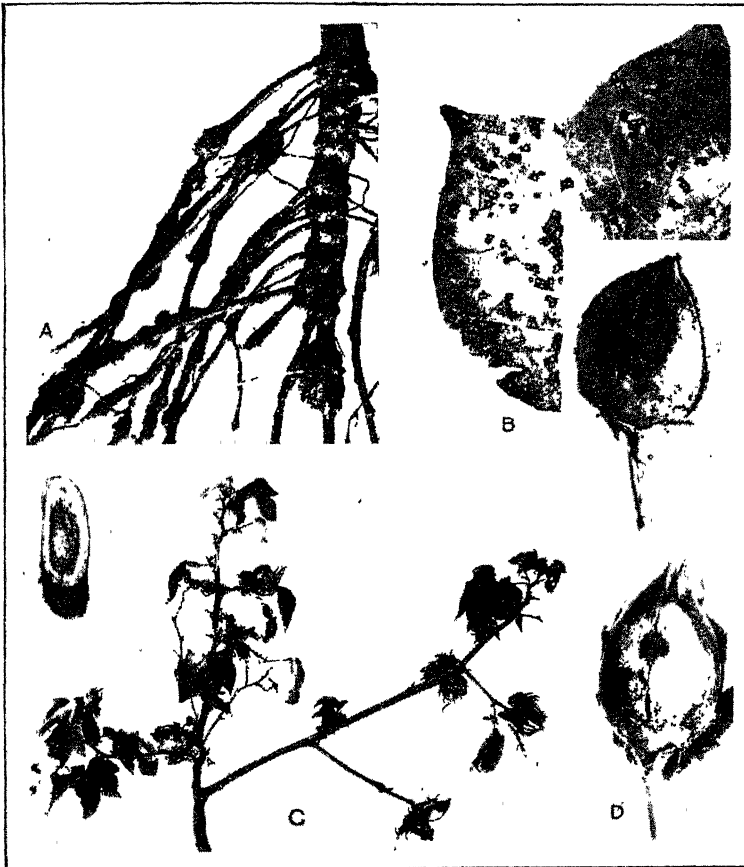


FIG. 26.—Four important diseases of cotton. A, An eelworm bores into cotton roots and causes rootknot. B, The angular leaf spot produces dead areas on the leaves and rotting of the bolls. C, The wilt disease stunts the plants and causes blackening of the inside of the stalks. D, This boll rot is due to anthracnose.

which enters the roots and plugs the water vessels. This parasite remains indefinitely in the soil, so that infested fields cannot be planted to the ordinary kinds of cotton. Resistant varieties bred by the Department of Agriculture have come into general use, however, and constitute an effective remedy for wilt. This trouble is widely distributed in the sandy soils of the coastal plain, from southern Virginia and North Carolina to Arkansas and eastern Texas, and is occasionally met in the Piedmont and other districts. (See Fig. 26.)

Texas Root-Rot.

Texas root-rot is due to another serious soil-infesting fungus, which occurs from Texas and Arkansas westward, principally on the black waxy or heavier types of soils. This causes a wilting of cotton over large areas in midsummer and constitutes a serious problem, as alfalfa, sweet potatoes, many fruits, and other crops are also susceptible, and because no thoroughly effective remedy is known.

Root-Knot.

Root-knot, a disease characterized by abnormal galls or swellings of the roots, is due to a tiny eelworm or nematode. The plants are dwarfed and the yield reduced. Root-knot occurs commonly in association with wilt on the same types of sandy soil. It attacks a very large number of other crops. Its control is based on rotation with immune crops or varieties, involving a readjustment of crop rotation.

Rust.

Rust is a name commonly used for a trouble marked by the early defoliation and premature death of cotton on soils lacking in vegetable matter and potash or poorly drained. It occurs throughout the Cotton Belt and causes large losses annually. The trouble is controllable by good farming methods, particularly by the use of potash fertilizers, stable manure, or green manuring, and by drainage.

Anthracnose

Anthracnose is a fungus disease of the cotton plant spread through the use of infected seed. It may cause a damping-off of the young seedlings and some injury to the plant, but

is most harmful as a cause of boll rot in wet weather. Anthracnose occurs to a greater or less extent over the entire Cotton Belt. It may be controlled by crop rotation and the use of disease-free seed.

Angular Leaf-Spot.

Angular leaf-spot, or bacterial blight, can be found in nearly every cotton field throughout the Cotton Belt as a leaf-spot, stem blight, and boll rot; but Upland cotton is quite resistant to it, and the losses are therefore not as great as in Egyptian cotton, which is very susceptible. The most effective method of control combines the use of disease-free seed with crop rotation.

All of these diseases are described more fully in Farmers' Bulletin 1187.

Cost of Production.

The problem of making ends meet has been especially serious for cotton growers in 1920 and 1921. Expenses have been high and prices low. Relief has been sought in efforts to enhance the prices to producers by various methods without marked success. Since the prices for each crop are determined after production and without regard to costs, farmers must attempt to forecast prices and to adjust operations so as to produce at a cost which will return a profit at the price for which the cotton will sell. Some farmers may not find it possible to reduce their costs low enough to meet prospective low prices for cotton, but may be able to produce something else with profit. In any case a knowledge of costs may be helpful to a farmer in determining how much cotton he should try to produce and how much he may profitably expend in producing it.

A grower who knows his own actual cost of production, and has average or standard figures to compare with his own, is in a fair way to stop small leaks in his expenses and to reinforce those features of his practice in which he has an advantage.

To assist cotton growers in establishing reasonable averages and working standards and to assemble cost information, which individuals acquire only slowly, the Office of Farm Management and Farm Economics undertook compre-

hensive studies of the cost of producing cotton. (See Fig. 27.) The first of these was made for the crop of 1918, in 10 representative counties in 4 States, the actual cost of producing cotton in 1918 being worked out for 842 farms. (See Bulletin 896, U. S. Dept. of Agriculture.) A similar study was made for the crop grown in 1919, the results of which are summarized in the charts on pages following.

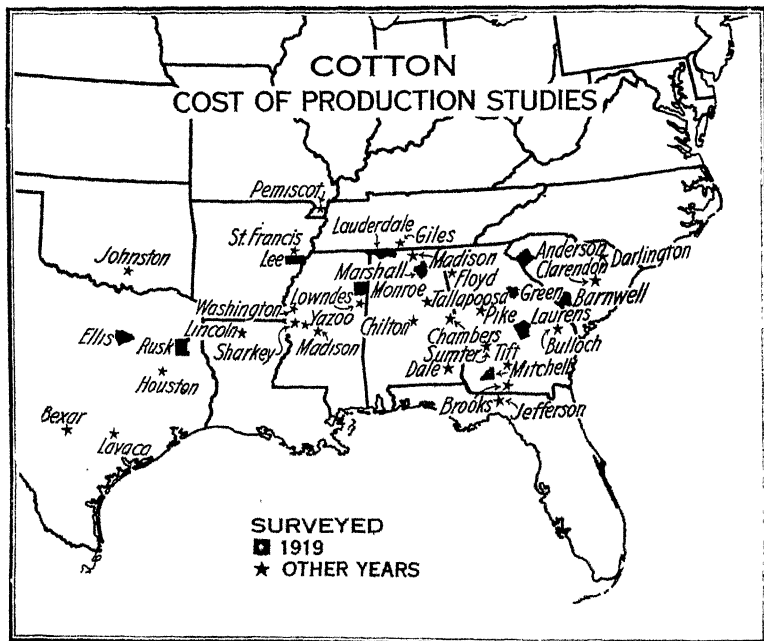


FIG. 27.—Location of surveys and cost of production studies in the Cotton Belt. The first of these was made for the crop of 1918 in 10 representative counties in 4 States. The results of the surveys made in 1919 are summarized in charts that follow.

Variation in Cost of Production.

A farmer who is keeping his own records and comparing with others must recognize the fact that costs necessarily vary from farm to farm, as well as from one region to another. This is due to variations in the character of producers themselves, as well as in the character of the land and of the methods employed in growing the crop. The variation in the net cost of lint cotton per pound on 783 farms in 1919 (Fig. 28), illustrates the wide range of costs.

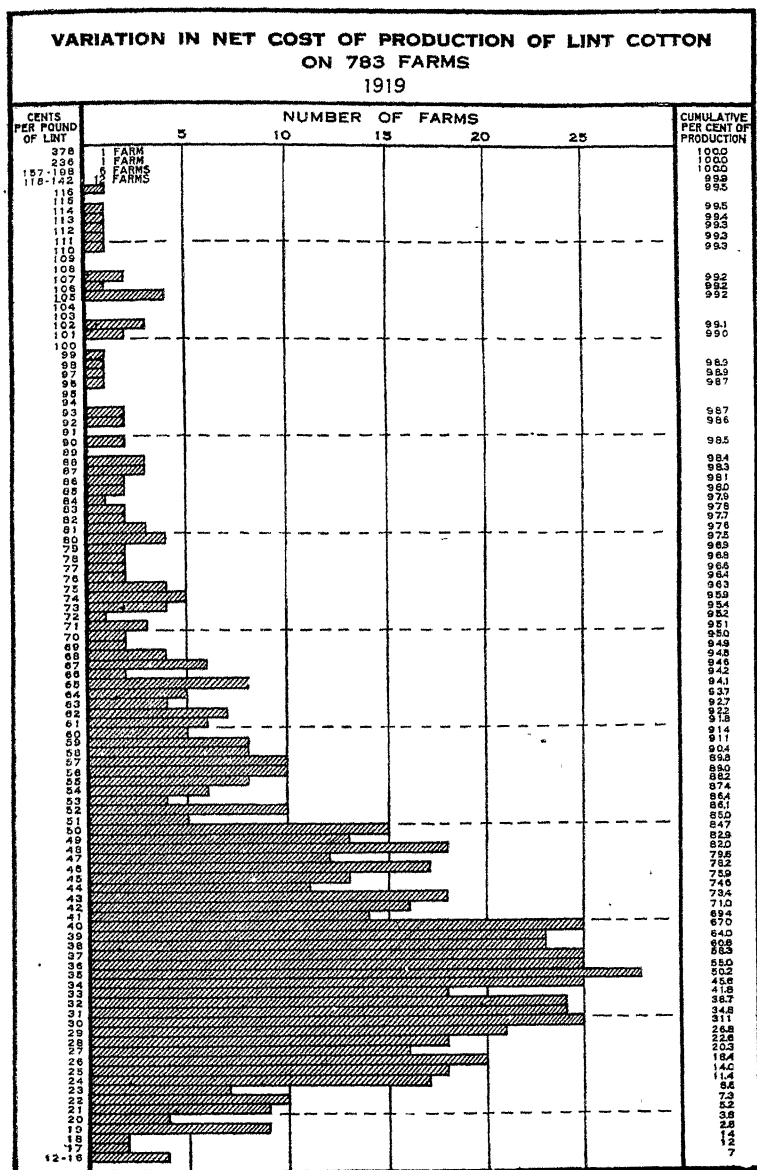


FIG. 28.—The net cost ranged from 12 cents to \$3.78 per pound of lint. One-half of the cotton cost 35 cents and less. The bulk of the cotton, 85 per cent, was produced at a cost up to 50 cents per pound.

It costs more to produce cotton in some regions than in others. The net cost per acre and the net cost per pound of lint in 1919 are shown in Figure 29 for each of 11 typical Cotton Belt counties. The average yields per acre reported in each case are shown in a column to the right of the chart. It will be noted that high cost per acre with good yields may result in low cost per pound, and low cost per acre with ordinary or poor yields in high cost per pound. In fact, judicious expenditures for fertilizer, good seed, good care of the crop, or a combination of them, pays. In any year much depends upon the seasonal weather. The 1919 crop was practically a failure in three of the counties surveyed.

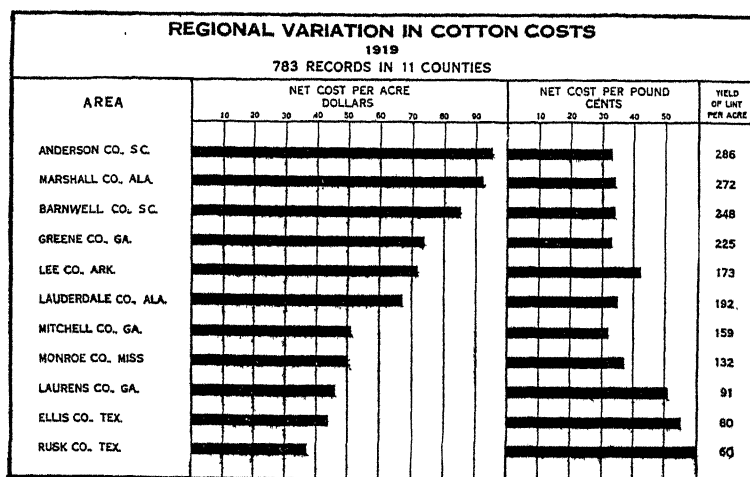


FIG. 29.—Variations both in the cost per acre and in the yield per acre cause variations in the net cost per pound of lint. The average acre in Anderson County cultivated at the highest cost in 1919 produced the highest average yield at the lowest cost per pound. It is not always the greater the cost the higher the yield. Note Lee County, Ark.

The distribution of costs differs with the practice, as is shown in Figure 30 for several of the more important factors. Thus labor per acre is relatively low in Ellis County, Tex., where the fields are large and level enough to permit the use of two horses and riding cultivators instead of a man to each mule. In the South Carolina and Georgia counties the use of fertilizer was very general and liberal, while in Ellis County, Tex., no fertilizer was used on cotton, and only one of the farms in Lee County, Ark., reported use of fertilizer. The value of the land, use cost, or rent of land is

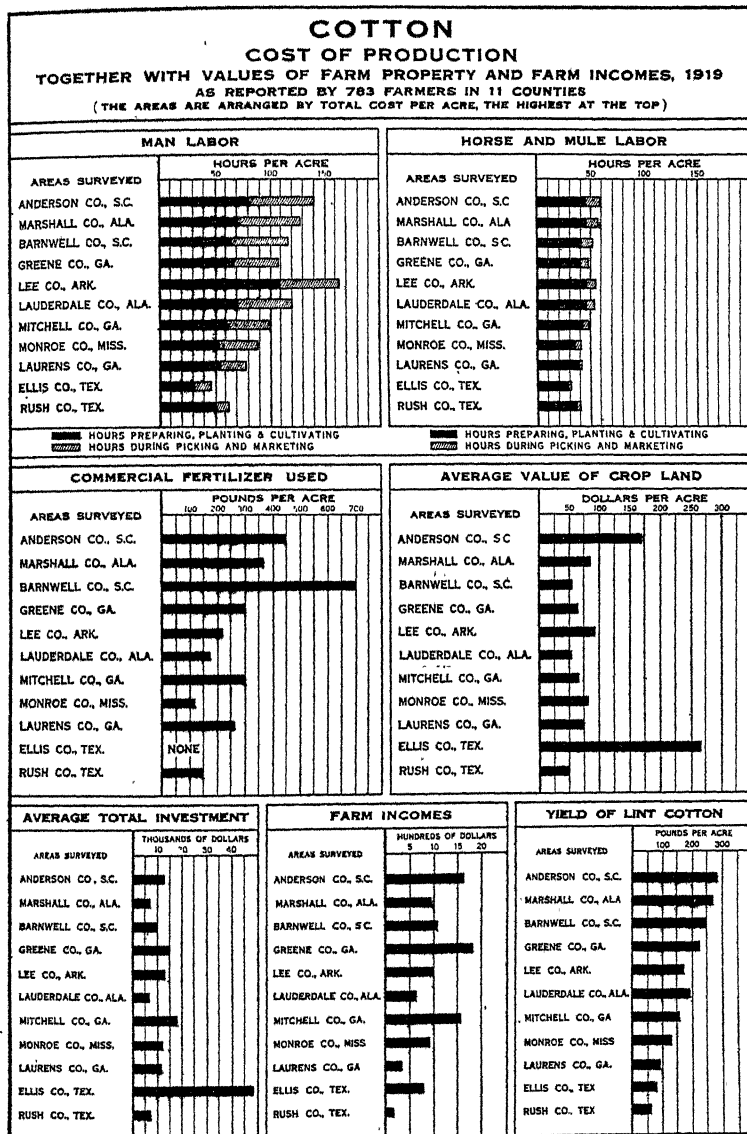


FIG. 30.—Counties are arranged in the order of the total cost per acre, the highest at the top. Note especially the contrast between Anderson County, S.C., and Ellis County, Tex. Cost per acre and yield per acre in Anderson County stands first among all the counties, is second in value of fertilizers used, in value of crop land, and in farm income; whereas Ellis County had next to the lowest yields produced with the smallest amount of labor, no fertilizer, and gave an average farm income on crop land averaging the highest in value of any of the counties.

another widely variable item, the lowest values being found in Rush County, Tex., and the highest in Ellis County, Tex. In addition to the average expense of labor, horse labor, fertilizer, and value of land, the chart shows also the value of the total farm capital, the farm income for 1919, and the yield of lint cotton per acre.

An Example.

As a guide for the use of farmers who wish to determine their actual costs for any season promptly and very closely,

Example for figuring costs per acre of cotton and per pound of lint.

Items.	Figures for Mitchell County, Ga., crop of 1919.			Your farm.					
				1921			1922		
	Amount.	Price.	Cost.	Amount.	Price.	Cost.	Amount.	Price.	Cost.
Labor:									
Man.....	100 hours.	\$0.30	\$30.00						
Mule.....	48 do.	.25	12.00						
Seed (bushel=30 pounds).....	1 bushel.	1.35	1.35						
Fertilizer.....	292 pounds.	1.021	6.13						
Total of foregoing items (84.1 per cent of operating cost) ¹			49.48						
Total operating cost (100 per cent)			58.63						
Credit seed.....	300 pounds.	3.04	12.00						
Net operating cost per acre.....			46.63						
Net operating cost per pound (\$46.63 = 159 pounds).....			.29						
Rent of land or in- terest on invest- ment, per acre..	\$67.00	6%	4.02						
Total net cost per acre (including rent).....			50.65						
Total net cost per pound (includ- ing rent).....			.32						

¹ Price, \$42 per ton.

² Operating costs represent all costs except interest on land. The remaining 15.6 per cent of operating costs is made up of manure, equipment, taxes, insurance, ginning, and overhead.

³ \$80 per ton.

an example is worked out, using the figures for Mitchell County, Ga., and space is provided for setting down the figures for any individual farm. It is best to use the actual figures, if possible, but even in case no attention has been paid to the time and materials used one can not go very far astray if careful estimates are made by means of comparisons with average or standard figures. In each case the yield of cotton should be estimated as closely as possible, because errors in the yield will make considerable differences in the computations of cost per pound.

Costs and Prices.

Though producers are more or less at the mercy of consumers with respect to price, they can exercise considerable

FARM PRICE OF COTTON AND THE PRICE OF FERTILIZER GEORGIA 1913 1918 AND 1921

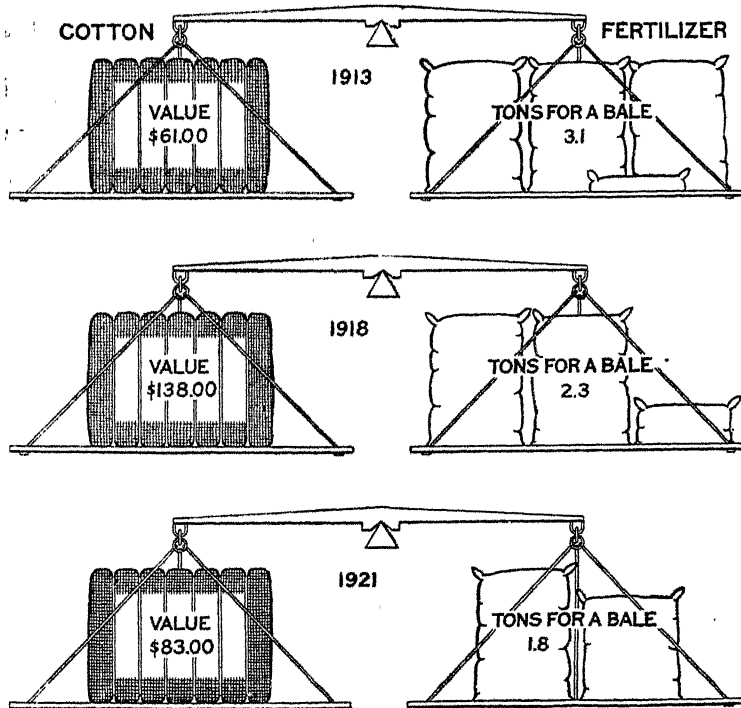


FIG. 31.—The cost of fertilizers is a very important item in the cost of production in the South Atlantic States. The data represented here for 1913, 1918, are taken from surveys of Sumter County, Ga. For 1921 prices represent Georgia.

control over the cost of their product. When prices were going up and the prospects for higher prices were still good costs were voluntarily increased, because it was good judgment to pay higher prices for labor, fertilizer, land, and machinery, if it were necessary in order to produce the cotton. The average cost of the 1918 crop was approximately 22 cents a pound, while the average farm price was

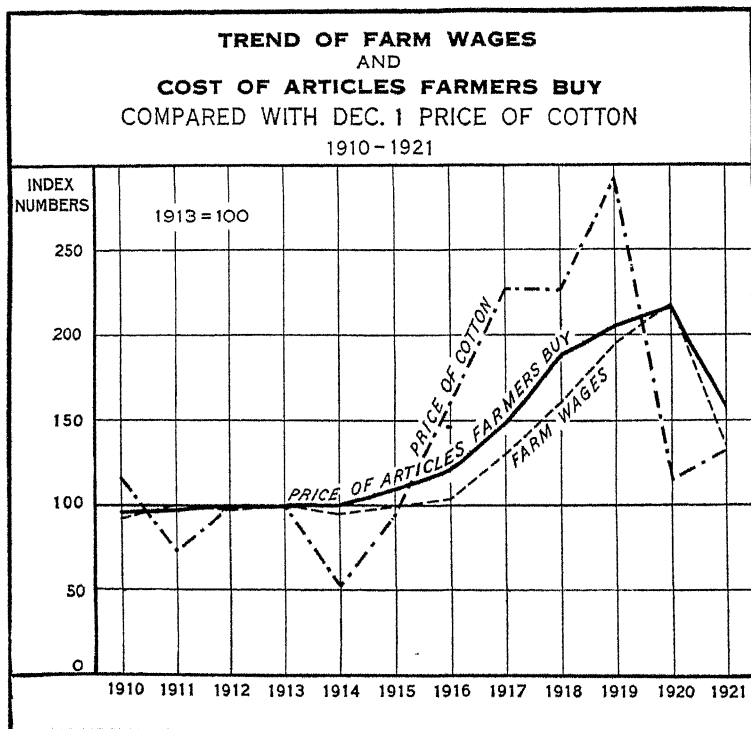


Fig. 32.—The price of cotton fell to a low point in 1914, rose to high points 1916-1919, and fell to a low point in 1920. Wages and prices of articles farmers buy rose less rapidly in the period of inflation and fell more slowly with deflation.

28.76 cents a pound, or enough to cover the cost of 85 per cent of the crop. Prices were still rising in 1919 and costs averaged 35 cents a pound, which was just about the farm price of 35.36 cents a pound, and half the growers failed to make costs. When the crop of 1920 was planted cotton prices were still high and no particular effort was made to cut expenses. While the crop was growing the price was falling, with the result that the crop produced at a high

cost had to be sold at a low price. Some retrenchment was made in 1921, as evidenced by the lower wages paid and the lower prices for materials, but not enough to offset the combined effect of a good crop, a large hold over, and a stagnant market. The relative changes in the cost of production for the years 1910 to 1921 are indicated in Figure 32, farm wages and the prices of things farmers buy being used as an index of the movement of the cost of producing cotton.

Organization for Profitable Production.

The cost of producing farm products, the farm income, and the welfare of the farm family and the community are strongly influenced by the enterprises selected and their relative magnitudes in the organization of the farm.

It has been found that those cotton farmers who in planning their cropping systems provide first for sufficient acreages of corn, small grains, hay, and other feed crops (including among these cowpeas, peanuts, velvet beans, and similar crops planted by themselves and interplanted among rows of other crops), not only to feed pigs, chickens, the farm work stock, and the family cows, but also to build up and maintain soil fertility, are able to produce cotton at low cost, and they get the best returns for land used and capital and labor expended. These farmers usually plan for as many acres of cotton as they can care for properly and harvest early with the available farm equipment and such outside assistance as may be relied upon.

Proper care of the crop involves thorough preparatory tillage, proper application of fertilizers and manures, thorough cultivation, and thorough and persistent combative measures against the boll weevil and other destructive insects.

After providing for farm needs, including fertility, and for such acreages of cotton as can be well cared for, other enterprises may be selected in order to make use of unutilized land and labor. Such enterprises may increase food and feed for sale or for some productive live stock enterprise, but care must be taken that these added enterprises do not seriously compete with cotton in its labor requirements or tend to diminish the fertility of the soil.

The choice of crops and groupings will vary according to conditions. For example, in Figure 33 are given the average

relative sizes of the crop enterprises on some of the more profitable 1-mule to 6-mule farms in communities in Sumter and Brooks Counties, Ga., in 1913 and 1914. A marked difference will be noted in the organization of the two communities. In the Sumter County community, after making fair provision for the farm needs, the remainder of the land was devoted largely to cotton, the most important commercial enterprise. In the Brooks County community the soil was thinner and it was necessary to pay particular attention to the maintenance of soil fertility, so a system was developed which gave a smaller acreage to cotton and paid particular attention to corn, legumes, feed crops, and hogs. Besides the

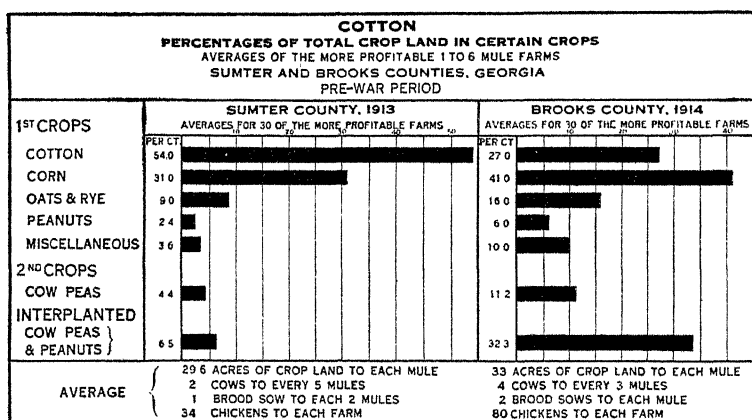


FIG. 33.—In Sumter County there is much greater specialization in cotton than in Brooks County. In the latter more attention is being given to the growing of crops that will maintain or improve soil fertility, consequently more live stock are kept and more leguminous crops are grown.

regular peanut crop, peanuts were planted between the corn rows on about one-third of the corn area. The Sumter County farms carried 2 cows to each 5 mules, while the Brooks County farms carried 4 cows to each 3 mules. The Sumter County farms carried 1 brood sow to each 2 mules, while the Brooks County farms carried 2 brood sows to each mule. Among the important miscellaneous crops on these farms were watermelons, sweet and Irish potatoes, sugar cane, and garden vegetables.

It is not intimated that these systems of cropping were the best that these farmers could have devised for their farms or for the communities represented, but they were evidently

better than the average in that they yielded comparatively high returns for the use of land, working capital, and labor.

Systems of cropping change as conditions change. Figure 34 gives the organization of crop enterprises on the more profitable 1-mule to 6-mule farms in Sumter County five years later, in 1918. The main difference between the 1913 and 1918 systems was a reduction in the percentage of land devoted to cotton in 1918 to better meet boll-weevil invasion and the high cost of fertilizers. The actual and relative number of cows and brood sows was increased. The 30 more profitable Sumter County farms in 1913 spent \$1,057 for feed, while the 1918 group spent only \$298 for this purpose. The 1918 system shows a larger planting of legume feed crops to reduce the cost of maintaining the live stock, to utilize land and labor not required by cotton, and also to maintain fertility better.

Financing the Cotton Grower.

The production of cotton in the United States rests upon credit to a rather unusual extent compared with most other agricultural products. The chief agencies from which this credit is obtained by the cotton farmer are the bank, the merchant, and in the case of tenants the landowner. In this credit extension the merchant, of course, is essentially an intermediary between the banker and the farmer, while in the case of the tenant the landowner, by guaranteeing the repayment of the credit advanced, also acts as an intermediary, either between the bank and the tenant or the merchant and the tenant.

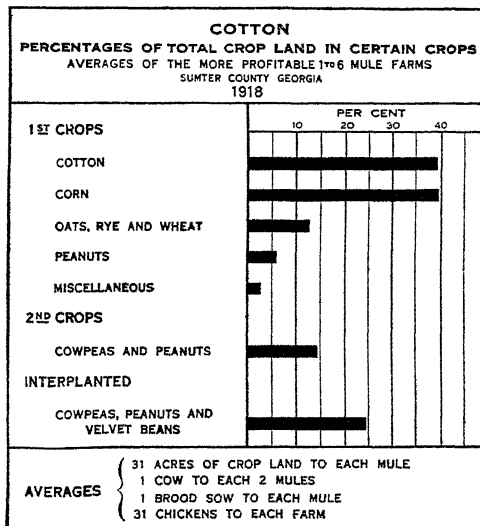


FIG. 34.—In 1918 cotton and corn held equal areas in Sumter County. Cowpeas, peanuts, and velvet beans were planted extensively after the other crops or interplanted with them.

Merchant credit as a rule is a particularly expensive and unsatisfactory form of credit, whether extended by the storekeeper, the implement dealer, or the cotton factor. The difference between cash prices and time prices usually far exceeds the cost of bank credit needed for the purchase of corresponding amounts of goods. The substitution of direct bank credit for merchant credit is therefore to be recommended wherever possible. The consolidation of numerous small loans into fewer and larger ones by means of credit associations would result in further economy. It is also to be hoped that the cotton farmer will, to an increasing extent, acquire and maintain his own operating capital and thus reduce the need for production credit and strengthen the security for such credit as is needed. Only in this way can be brought about a credit situation in which an ample supply of capital will be available on terms favorable to the borrower.

According to a study made by the Department of Agriculture in the spring of 1921, the average prevailing rate of interest on personal and collateral loans to farmers for each of the 10 leading cotton-producing States was as follows:

	Per cent
North Carolina	6.23
Tennessee	7.88
South Carolina	8.06
Mississippi	8.11
Louisiana	8.34
Alabama	8.46
Georgia	8.94
Texas	9.68
Oklahoma	9.84
Arkansas	9.70

In all of these States the actual average interest cost, however, was considerably higher than shown by the above figures, because of the prevalent practice among the banks in these States of collecting interest in advance, and of a common but less frequent practice of requiring borrowers to maintain a minimum deposit at the bank while the loan is outstanding.

Because of the relatively high percentage of tenancy in the cotton-producing States, the question of security for loans is especially significant. The following table shows the prevailing forms of security for personal and collateral loans to farmers in the so-called Cotton States.

Form of security given for personal and collateral bank loans to farmers in 10 leading Cotton States; per cent of loans secured by various forms of security.

State.	Note without indorsement.	Note with one or more indorsements.	Mortgage on live stock.	Crop lien.	Warehouse receipt.	Stocks and bonds.	Other ways.
North Carolina....	10.5	68.6	1.7	5.2	2.1	7.5	4.4
South Carolina....	9.1	41.0	13.6	20.2	9.7	4.8	1.6
Georgia.....	12.5	50.1	14.5	4.9	10.0	3.5	4.5
Tennessee.....	18.1	67.2	5.0	1.5	8	5.8	1.6
Alabama.....	10.4	20.1	31.5	26.1	7.5	2.4	2.0
Mississippi.....	12.7	27.0	20.2	15.1	8.0	9.1	7.9
Arkansas.....	12.1	37.9	22.7	19.9	3.0	2.2	2.2
Louisiana.....	15.5	52.7	12.4	5.2	2.7	9.0	2.5
Oklahoma.....	17.2	12.9	49.3	18.1	.7	1.2	6
Texas.....	21.9	18.0	38.1	18.3	1.6	1.1	.0

Personal notes with one or more indorsements are the prevailing form of security in a large majority of these States. Mortgages on live stock and crop liens come next in importance. Warehouse receipts are as yet seldom used by the farmer, but will no doubt increase in popularity as adequate warehouse systems are established.

One of the most common complaints heard with reference to bank loans to farmers from these States, as well as from those in other sections of the country, is that the term is frequently too short to meet the farmer's credit needs. The prevailing term of such loans may be seen from the following table, based on the study to which reference has already been made:

Average term of personal and collateral loans to farmers: Per cent of banks reporting various average terms, March, 1921.

State.	One to thirty days.	One to three months.	Three to six months.	Six to nine months.	Nine to twelve months.	More than one year.
North Carolina.....	28.0	53.7	15.9	2.4	.....
South Carolina.....	12.5	40.1	40.8	6.6	.....
Georgia.....	3.9	50.3	38.5	7.3	.....
Tennessee.....	28.5	45.0	14.6	11.9	.....
Alabama.....	4.2	30.5	39.9	25.4	.....
Mississippi.....	9.2	31.2	38.5	19.3	1.8
Arkansas.....	7.2	36.7	45.9	10.2	.....
Louisiana.....	9.3	37.2	37.2	16.3	.....
Oklahoma.....	0.4	11.6	49.6	31.9	6.5	.....
Texas.....	7.9	52.1	33.0	6.7	.3

Cotton Handling and Marketing.

The days of the American homespun are past, and now the entire American cotton crop is produced for the market. The course of the cotton from the producer to the mills depends on the point of origin, the location of the mills for which it is destined, the means of transportation, and the methods of trading. The price that the producer receives depends not only upon the supply and demand at the consuming points, but also upon the cost of handling from the producer to the mills, the middlemen's profits, and the ability of the producer to take advantage of the most economical methods of marketing his crop.

The process of separating the lint from the seed is known as ginning. This the producer usually has done before he sells, which enables him to dispose of both the seed and the fiber to the best advantage. The producer may sell his cotton at once or hold it until some future date. He may sell directly to a mill buyer or to some one of the numerous grades of dealers in cotton.

Southern cotton mills consume about one-fourth of the American crop, the bulk of which is produced locally in the South Atlantic States. The rest of the crop must be transported by rail or water either to northern mills or abroad. The movement of the great American cotton crop therefore necessitates an extensive system of transportation as well as of markets.

Short Staple and Long Staple Cottons.

The length and the character of the fiber or staple are the most important of the factors that determine the value of cotton. Cottons differing in length and character of fiber require special methods in handling and marketing. Commercially all cotton is divided into two classes—short staple, that of $1\frac{1}{8}$ inches and under in length, and long staple, cotton $1\frac{1}{2}$ inches and over in length of fibers. Cottons, however, having a staple length of $1\frac{1}{8}$ inches usually command a premium over short-staple cottons of $\frac{2}{3}$ to 1 inch in length of staple. The length and strength of fiber produced in any locality depend on the variety planted, the soil, climatic conditions, and cultural methods.

Short staple.—Short-staple cotton is grown in all parts of the Cotton Belt and constitutes the bulk of the American

crop, or an average of 92 per cent. The length of the fiber of this cotton varies from three-fourths to $1\frac{1}{16}$ inches. In parts of the Piedmont region and on the better types of soils the length is often more than an inch, while on the sandy and other poorer soils it may be less than seven-eighths of an inch. On the rich river bottoms and on the black prairie lands of Texas and Oklahoma the cotton grown is usually $1\frac{1}{16}$ inches in length and has a characteristic strong, hard staple.

Long staple.—Upland varieties with fiber $1\frac{1}{8}$ to $1\frac{3}{4}$ inches long are grown in many parts of the South, the production of some sections being recognized by characteristic differences in quality and strength of staple. The bulk of the long-staple upland cotton is produced in the Yazoo-Mississippi Delta, the north central section of South Carolina, and the bottom lands of Texas and Arkansas. (See table following:)

Comparison of production of long-staple cotton ($1\frac{1}{8}$ inches and above in length) with production of short-staple cotton (under $1\frac{1}{8}$ inches in length) in the United States; estimates 1919 and 1920.

State.	Bales, thousands, i e. 000 omitted						Per cent.					
	Under $1\frac{1}{8}$ inches.		$1\frac{1}{8}$ to $1\frac{1}{4}$ inches, inclusive.		Over $1\frac{1}{4}$ inches. ¹		Under $1\frac{1}{8}$ inches.		$1\frac{1}{8}$ to $1\frac{1}{4}$ inches, inclusive.		Over $1\frac{1}{4}$ inches. ¹	
	1919	1920	1919	1920	1919	1920	1919	1920	1919	1920	1919	1920
Alabama.....	711	662	2	1	.....	.....	99.7	99.9	0.3	0.1	.....	.....
Arkansas.....	718	947	136	225	30	37	81.2	78.3	15.4	18.6	3.4	3.1
Arizona.....	21	21	.....	.....	39	82	35.0	20.6	.....	.....	65.0	79.4
California.....	45	64	10	3	1	8	80.3	85.3	17.9	4.0	1.8	10.7
Florida.....	14	15	.....	2	2	1	87.5	82.8	.....	11.1	12.5	6.1
Georgia.....	1,639	1,384	18	27	3	1	98.7	97.8	1.1	1.9	.2	.3
Louisiana.....	290	375	7	10	1	2	97.3	96.9	2.4	2.6	.3	.5
Mississippi.....	619	612	300	252	42	29	64.4	68.5	31.2	28.2	4.4	3.2
Missouri.....	60	71	4	5	.....	1	94.4	92.3	5.6	6.4	.....	1.3
North Carolina.....	817	900	12	10	1	2	98.5	98.7	1.4	1.1	.1	.2
Oklahoma.....	937	1,125	77	192	2	4	92.2	85.2	7.6	14.5	.2	.3
South Carolina.....	1,309	1,437	93	144	24	29	91.8	89.3	6.5	8.9	1.7	1.8
Tennessee.....	293	312	15	11	2	1	94.5	96.2	4.9	3.5	.6	.3
Texas.....	2,916	4,091	177	230	6	5	94.1	94.6	5.7	5.3	.2	.1
All others.....	28	27	.....	.....	.....	.....	100.0	100.0	.....	.....	.....	.....
United States.....	10,417	12,049	851	1,112	153	205	91.2	90.2	7.5	8.3	1.3	1.5

¹ Including 91,963 running bales of American-Egyptian and 1,725 bales of Sea Island cotton for 1920, reduced to 500-pound bales

Sea island.—Sea island is a distinct type of cotton, noted for its length of staple, $1\frac{1}{2}$ to $2\frac{1}{2}$ inches, and its strong, very fine, and silky fibers. The sea-island cotton produced on the islands off the coast of South Carolina has the longest and finest staple of any cotton. That grown on the coastal plain of Georgia and north Florida is somewhat shorter and coarser. At present the boll weevil has practically stopped the growing of sea-island cotton in the United States, the crop of 1920 amounting to less than 2,000 bales of 500 pounds each. Recently, however, a new upland variety called Meade has been developed in this section and is replacing the sea-island cotton. Meade cotton has a very fine strong staple $1\frac{1}{2}$ to $1\frac{3}{4}$ inches in length, comparable with sea island.

American Egyptian.—The American-Egyptian cotton crop is produced chiefly in the valleys of the Salt, Gila, and Colorado Rivers of Arizona, and in the Palo Verde, Imperial, and San Joaquin Valleys of California. Practically the entire crop is of a single variety, known as Pima, which produces a staple of from $1\frac{1}{2}$ to $1\frac{3}{4}$ inches in length.

Ginning.

Two types of machines are now in use for separating cotton fibers from the seed on which they grow. They are known as roller and saw gins. The roller gin is the older type. In the roller gin the fibers are caught between a leather-covered roll and a fixed steel bar or blade, while a movable bar knocks the seed loose. The roller gin is especially adapted for use in ginning varieties having slick or smooth seed and long fibers that are easily detached from the seed coat, such as sea island, American Egyptian, and Meade. The output of the roller gin is smaller per day than that of the other type, known as the saw gin. In the saw gin the fibers are caught in the teeth of circular saws and pulled through a slot between metal ribs. The slot is adjusted so as to permit the passage of the fibers but to prevent the passage of the seed, so that the cotton is stripped from the seed, which fall back and out of the way. The saw gin is especially adapted for the ginning of short staples with fuzzy seed and fibers that are tightly attached to the seed coat.

While the ginning of cotton is done primarily in order to bale the farmer's product so that it may be sold, it is the first

step in the preparation of the fiber for spinning, and therefore the condition in which the lint comes from the gin has a most important bearing on its future value and is the primary basis for grades on which purchases are made. Some of the factors influencing the grade of cotton as it comes from the gin are the care with which it has been harvested and prepared for ginning, i. e., whether ripe, clean, and dry; second, the condition of the ginning mechanism and the skill of operation, i. e., clean machinery in prime condition, operated both as to the feeding and speed with care, taking into consideration the type of the cotton being ginned and its physical condition.

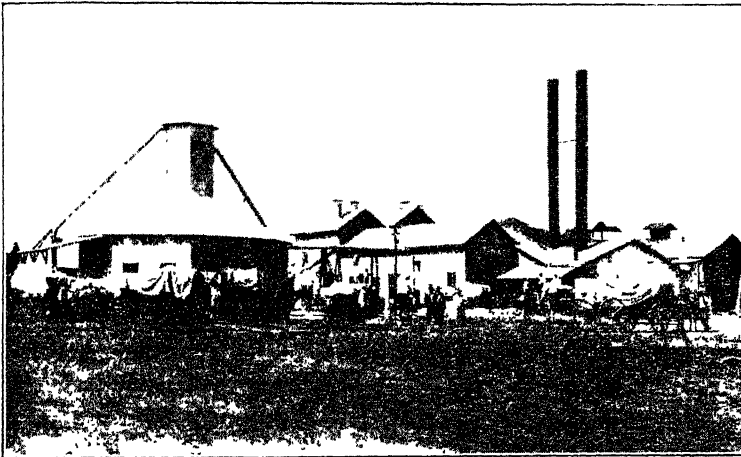


FIG. 35.—Cotton gin in Texas. Each wagon holds enough seed cotton to make a bale of lint weighing about 500 pounds.

Baling.—As the lint or fiber (or raw cotton) comes from the gin it is put up in packages of different sizes and shapes. The bulk of the American crop, however, is packed into a press box 54 inches long and 27 inches wide and to a depth of about 45 inches. This makes the standard “flat” or “square” bale, which weighs about 500 pounds. It is covered on two sides and on the ends with bagging and is tied with six iron bands. In the western part of the Cotton Belt there are some gins which make bales cylindrical in shape but known as “round” bales. These are approximately 35 inches long and 22 inches in diameter, are completely covered with bagging, and weigh about 250 pounds. The sea-

island cotton produced in South Carolina is put up in bags $7\frac{1}{2}$ feet long and $2\frac{1}{2}$ feet in diameter and weigh approximately 350 pounds.

Compressing.—With the exception of the round bale and the recently devised gin-compressed bale, which is a small square bale and, like the round bale, built up under pressure automatically as the ginning is done, the American cotton bale is of comparatively low density and is not only unwieldy but does not fit into either freight cars or ship holds economically. In order that the maximum number of pounds of cotton may be packed for shipment, square bales are subjected to a recompression by which the cotton is compacted to a high density and the bale reduced to approximately one-half its original size. At the same time patches are added to cover all sample holes and to make up the usual tare allowance. Plants for recompressing the bales are usually located at interior markets and railroad concentration points and are known as “compresses.”

The standard 500-pound square bale as it comes from the gin has a density of only 12 to 15 pounds per cubic foot, and from 30 to 35 of them fill a 36-foot box car. When they are compressed at the ordinary or standard compresses to a density of 22 to 24 pounds per cubic foot, from 65 to 75 bales may be loaded into a car. The “round” gin-compressed bale, weighing about 250 pounds, has a density of 32 to 37 pounds per cubic foot, and approximately 200 of them may be packed in a car, equivalent to 100 standard bales. The square gin-compressed bale has a density of about 35 pounds to the cubic foot.

At some of the concentration points and ports, such as Houston, Galveston, New Orleans, Mobile, Augusta, and Savannah, there are “high-density” compresses, which give the bale a density of 35 pounds or more per cubic foot, which results in a still greater saving of car and cargo space.

Custom ginning.—In the early days of the cotton industry the larger plantations owned and operated gins, but with the extension of the industry and the growth of the number of small farms came the establishment of public gins. The efficiency of the public gins has led to the abandonment of practically all of the old plantation gins. Even where plantation gins still operate they also, as a rule, do custom

ginning. Public ginneries are now established in practically every locality where the production of cotton is sufficient to support one. During the season of 1920-21 there were in actual operation 18,440 ginneries, which ginned on an average of 720 bales each.

The modern public gin is equipped with pneumatic elevators and distributors, by which the seed cotton brought in by the growers is sucked up from the wagons through pipes and, after passing through cleaning apparatus, is distributed to the different ginning machines or gin stands, as they are called. (See Fig. 35.) The lint, after it is taken from the seed by the saws, is again caught in a blast of air and conveyed through flues to the condenser and baling press. The seed fall into a trough, through which they are carried either by a screw conveyor or by an air blast to a seed chute or to bins in a seed house. If the grower desires the return of his seed he drives his wagon under the seed chute and receives them as they come from the gin. If, however, he sells the seed to the ginner or to some other agent of the cotton-oil mills, they are delivered to the bins in the seed house and from there transferred in car lots to the oil mills. Public ginneries usually make a charge for ginning by the hundred pounds of seed cotton, and an extra charge for the bagging and ties applied to the bales. These charges or tolls vary in the different sections according to the costs involved. They are regulated also to some extent by agreement and by local laws.

Selling cotton in the seed.—In a few sections of the Cotton Belt some farmers sell their cotton before it is ginned, or "in the seed," as it is known. The practice of selling cotton in the seed is most prevalent in those sections where the cotton-growing industry has only recently developed or where cotton is not very extensively grown. The ginneries buy the cotton seed as it is brought in and gin it whenever enough has accumulated for a run. In settling with the producer the average outturn or lint percentage of the community is usually taken as a basis. The ratio of seed to lint is approximately 2 to 1, though some of the improved varieties turn out from 35 to 40 per cent of lint. The application of averages therefore often results in not giving the individual farmer the price he deserves. From every angle the practice

of selling cotton in the seed is most unfortunate, since the producer has no incentive for growing better varieties or for making any effort to improve his grade and is prevented from maintaining the purity of his seed supply.

Handling Cotton Seed.

As indicated above, about two-thirds of the weight of the cotton, as it is picked and hauled to the gin, is seed. With the exception of such seed as is required for planting, practically all cotton seed now reaches the oil mills, where it is crushed and the oil extracted. The seed is now a valuable part of the cotton crop and is becoming still more valuable as the demand for its products increases.

Oil mills.—Cotton seed being bulky, the cost of transportation makes long-distance shipments unprofitable; consequently oil mills have been located in the producing region, generally at points at which the seed can be collected conveniently from the ginneries. In 1920 there were 675 seed-crushing oil mills well distributed throughout the Cotton Belt. The four primary products from crushing cotton seed are linters, hulls, cake, and oil. The process of crushing, briefly described, is as follows:

The seed first are cleaned of dirt and trash, then passed through a delinting machine, which removes the short lint or fuzz, making what are known as "linters"; it is then passed through machines which crush or cut the seed in fine pieces and separate the hulls from the kernels; and finally the oil is expressed from the kernels in hydraulic presses, leaving a residue which is called "cake" and which when ground becomes cottonseed meal. In the "cold-press" mills the whole seed is crushed and no effort is made to separate hulls from kernels.

Warehousing.

The warehousing of cotton after ginning is very important economically. Leaving the baled cotton exposed to the weather results in large losses annually from the rotting of the fiber. Such damage is commonly known as "country damage." The cotton warehouse is a place of shelter and protection from fire and theft; a place for classing and assorting to meet mill requirements; and finally it is a place

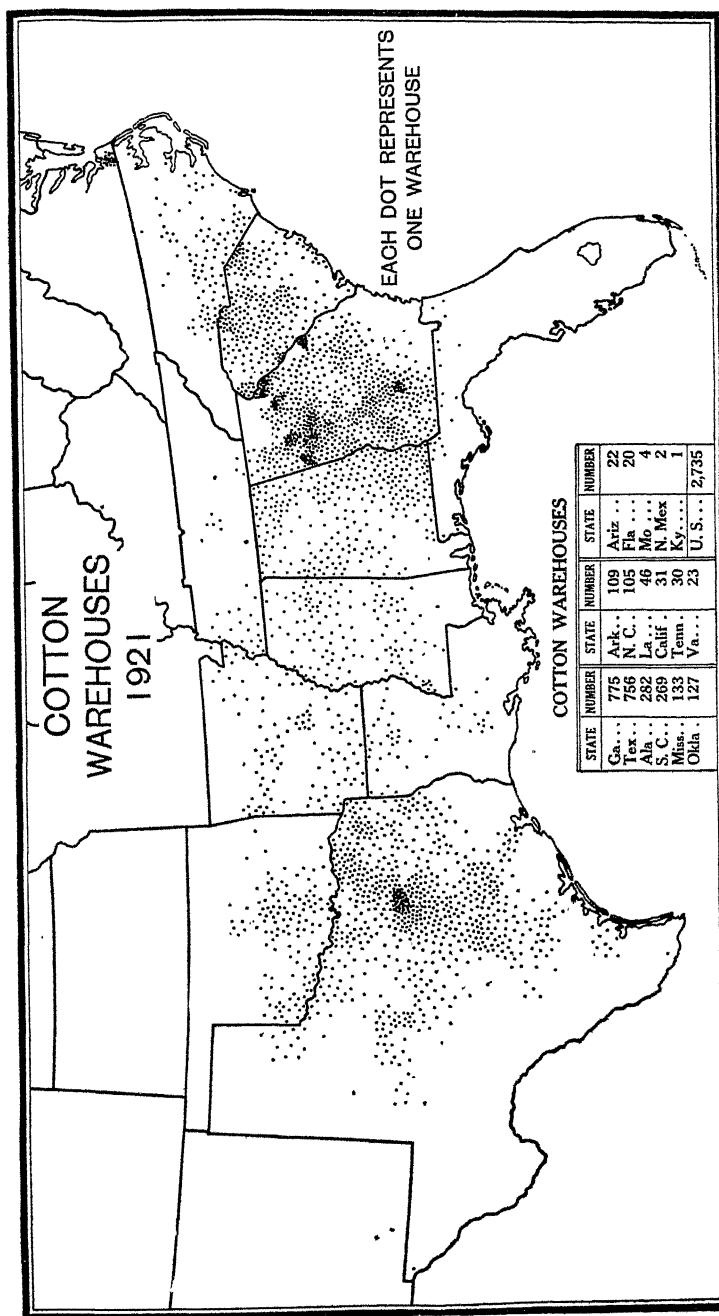


FIG. 36.—There are warehouses at many local markets, as well as at the larger concentration points throughout the South. Where cotton is customarily marketed as soon as it is ginned there are comparatively few warehouses, except at concentration points.

where cotton may be deposited under conditions which enable the owner to obtain money advance upon it until such time as he may desire to sell. Receipts of responsible warehouses are considered among the best kinds of security. The Federal warehouse act of August, 1916, facilitates the use of warehouse receipts by holders of cotton in financing themselves while holding for favorable market conditions.

Warehouses.—Warehouses for storing cotton have been built at many local markets, as well as at the larger concentration points throughout the South. (See Fig. 36.) In Arkansas, Oklahoma, and Texas, where much of the cotton is customarily marketed as soon as it is ginned, and is shipped

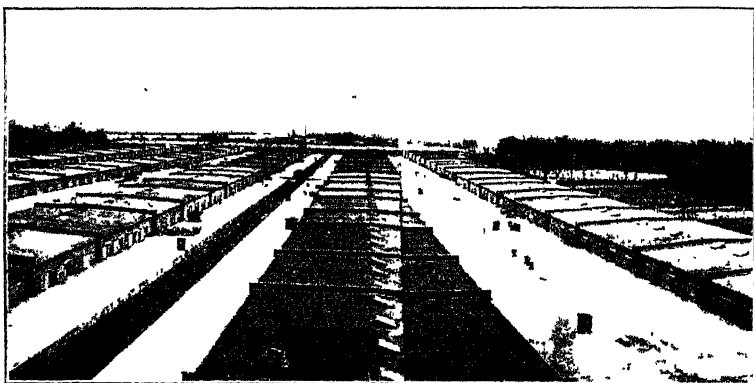


FIG. 37.—A modern concentration and export warehouse of semislow-burning construction. The wide courts are for receiving from cars and for delivery to the compress in the background. The hose houses are located between the buildings.

directly to the mills or exported, there are comparatively few warehouses, except at concentration points where the cotton is held by merchants. The same statement applies generally to Tennessee, Mississippi, and Louisiana. In the Eastern States warehouses are usually accessible to the farmers.

Grading Cotton.

The value of cotton to the consuming mills is measured not only by the length, strength, and uniformity of the staple but also by its color and by the amount of foreign material that it contains. While in the wild state species of cotton are found with fibers of a variety of colors, the principal varieties of commerce, with the exception of a few, such as the brown Egyptians, are of a creamy or pure white color.

Seasonal conditions, such as frosts or excessively damp or rainy weather, stain and discolor cotton. In some sections cotton unduly exposed to the weather after maturing receives a bluish cast or becomes mildewed. This condition so frequently occurs in some sections as to lead to the belief that the damage is connected with certain types of soil. The fibers of "blue cotton" are usually weakened. Dirt, sand, broken leaves, and stems become lodged in cotton fibers during storms and long exposure in the field, and when picked and ginned with the cotton reduce its value in proportion to the quantity of such foreign matter present.

Standards for grading.—There has always been considerable confusion in the marketing of cotton, due to the fact that nearly every market had its own grades, and these were frequently changed to meet special crop conditions.

In order to simplify cotton marketing by making a single set of standard grades, on which quotations and

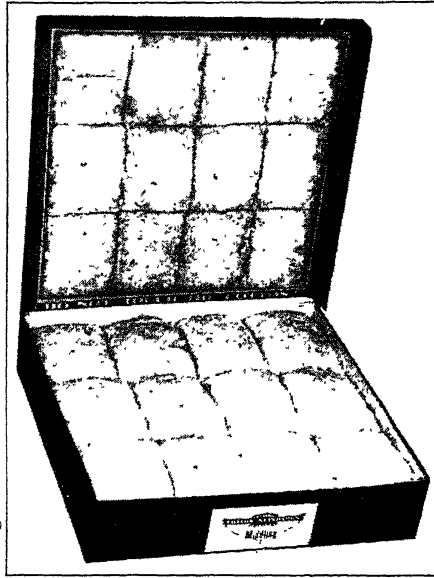


FIG. 38.—Grading by standards. A full set of white standards consists of 9 boxes, each containing 12 samples of the same grade of cotton. The 12 samples indicate the range of diversity allowed within the grade.

purchases and sales could be based, the United States Department of Agriculture was authorized in the appropriation bill for the fiscal year 1909 to prepare grade standards. Subsequent legislation enlarged these powers and authorized the sale of copies of the Official Cotton Standards to all who desired them. The United States Official Cotton Standards for grade have now been adopted by the exchanges of practically all the leading cotton markets of this country. Approximately 2,500 full and fractional copies of the standards have been sold to the American cotton trade. Copies have

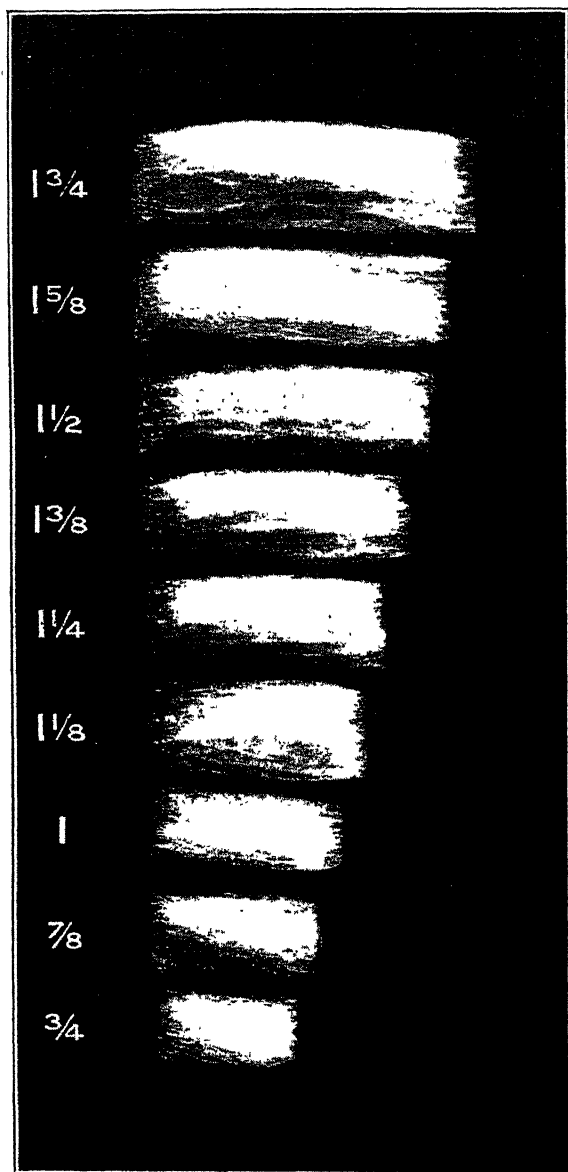


FIG. 39.—A photographic representation of the official cotton standards of the United States of those lengths of staple for which types are available for distribution, each respective length as shown being obtained from the original type bale.

also been sold into practically all the foreign markets. (See Fig. 38.)

Bolly cotton.—In the western and northwestern sections of the Cotton Belt large quantities of bolls, more or less matured, are frequently caught by early frosts which kill the plants and arrest the further development of the fibers. Such of these bolls as are not too severely damaged crack open and produce a cotton of poor character, fluffy and soft, and filled with shale, or the finely divided smooth inner surface of the carpel, which adheres closely to the fibers and causes waste during spinning. So much of such cotton has been caught by frosts in recent years that steps have been taken to salvage as much as possible. These frost-opened bolls are gathered and put through machinery which first picks the cotton from the bolls and then gins the cotton. The lint thus obtained is known as “bolly cotton” and brings only a fractional part of the price of well-matured white cotton.

Snaps.—Recently still another type of cotton has appeared in the West. It is known as “snaps,” and its name is significant of its character. Owing to labor shortages, fields of mature cotton are sometimes left unpicked until late fall or winter. It is then much easier, especially if the weather be cold, to snap the bolls off of the plants than to pick the cotton. The “picking” is done later by machinery, and the cotton is then ginned and baled in the usual manner. While this cotton is fully matured, it is likely to be discolored and trashy. Snaps or snapped cotton also brings a lower price than regular cotton, but its spinning value is above that of bolly cotton.

Linters.

All cultivated varieties of cotton, with the exception of Sea Islands and some Egyptians, produce two types of fibers on their seed coats—a long fiber suitable for spinning and a short, somewhat weaker, fiber usually called fuzz. The long fibers are removed and baled at the gins and constitute the cotton of commerce, while the short fibers, or fuzz, are removed in a second and more intense ginning known as “delinting” or “cutting” and constitute what are known as linters. Delinting is generally done at cotton-oil mills as a step in the preparation of the seed for crushing. Linters also contain varying amounts of the long fibers that have escaped

through the gins without being removed. Linters are packed in bales similar to the ordinary cotton bale and weigh on an average about 500 pounds to the bale. The production of linters has increased from 114,000 bales in 1899-1900 to 440,000 bales in 1920-21. In 1916-17, during the World War, 1,331,000 bales of linters were cut, to be used chiefly in the production of explosives. The annual production of linters during the last 20 years, together with the ratio of linter production to cotton production, is shown in the accompanying table:

Annual production of linters.

Year.	Bales of linters.	Per cent of cotton crop.	Year.	Bales of linters.	Per cent of cotton crop.
1899-1900.....	114,000	1.2	1910-11.....	398,000	3.2
1900-1901.....	143,000	1.4	1911-12.....	556,000	3.4
1901-2.....	166,000	1.5	1912-13.....	602,000	4.2
1902-3.....	196,000	1.8	1913-14.....	629,000	4.2
1903-4.....	195,000	1.9	1914-15.....	856,000	5.3
1904-5.....	245,000	1.7	1915-16.....	931,000	8.3
1905-6.....	230,000	2.0	1916-17.....	1,331,000	10.9
1906-7.....	322,000	2.3	1917-18.....	1,126,000	10.0
1907-8.....	268,000	2.3	1918-19.....	929,000	7.7
1908-9.....	346,000	2.5	1919-20.....	608,000	5.4
1909-10.....	313,000	2.9	1920-21.....	440,000	3.3

Uses of linters.—During war time linters are used chiefly in the manufacture of explosives, but during peace time the felting quality of linters and the chemical composition of the fibers are utilized in the manufacture of a variety of articles, as shown in the following list:

Batting.
Wadding.
Stuffing material for:
 Pads.
 Cushions.
 Comforts.
 Horse collars.
 Mattresses.
 Upholstery.
Absorbent cotton.
Mixing with shoddy.
Mixing with wool in hat making.
Mixing with lamb's wool for fleece-lined underwear.
Felt.
Low grade yarns:
 Lamp and candle wicks.
 Twine.
 Rope.

Low grade yarns—Continued.
 Carpets.
Cellulose:
 Writing paper.
 Guncotton, nitro-cellulose.
 Pyrocellulose.
 Smokeless powder.
 Pyroxylin.
 Varnishes—
 Coating for metals.
 Artificial leather.
 Weatherproofing.
Plastics—
 Celluloid.
 Collodion.
 Varnishes.
 Artificial silks.
 Photographic films.

Cotton Markets.

A cotton market may be defined as a place where a number of men meet to buy and sell cotton. The system begins with the village or town where dealer meets producer and ends with the point where dealer delivers to spinner. The trading may be in actual cotton or in contracts for future delivery. The term "spot cotton" is used to designate actual cotton on the market, and a "spot market" is one dealing

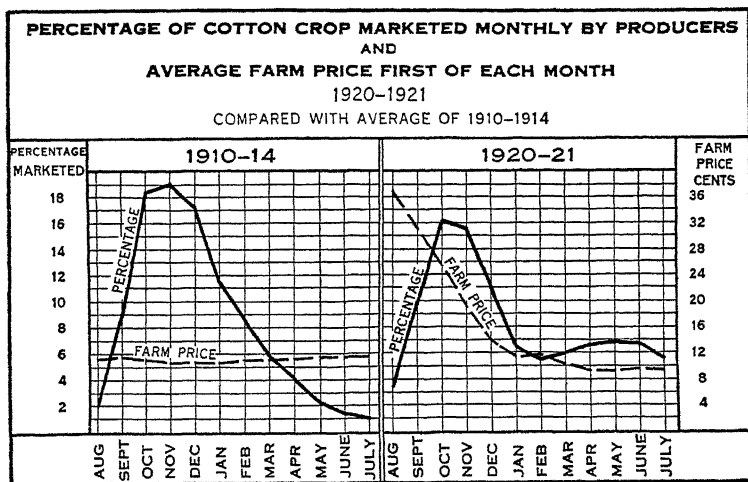


FIG. 40.—A large proportion of the cotton crop is annually marketed September to January, inclusive. This heavy marketing ordinarily depresses the farm price, which rises slowly as the marketing diminishes. Last year (1920-21) deflation, business depression, and a large carry-over of stocks caused the farm price to fall almost continuously from August to May of the following year.

in spot or actual cotton. In the future markets the trading is done in contracts to deliver at some future date. A future contract usually calls for 100 bales or approximately 50,000 pounds of cotton to be delivered during a specified future month.

Spot markets.—The spot markets are classified, according to their location and their functions in cotton trading, as primary and interior markets.

Primary markets are villages and towns where baled cotton is first put on the market and sold by the producer. Cotton buyers go into almost every village and town where a ginnery is to be found.

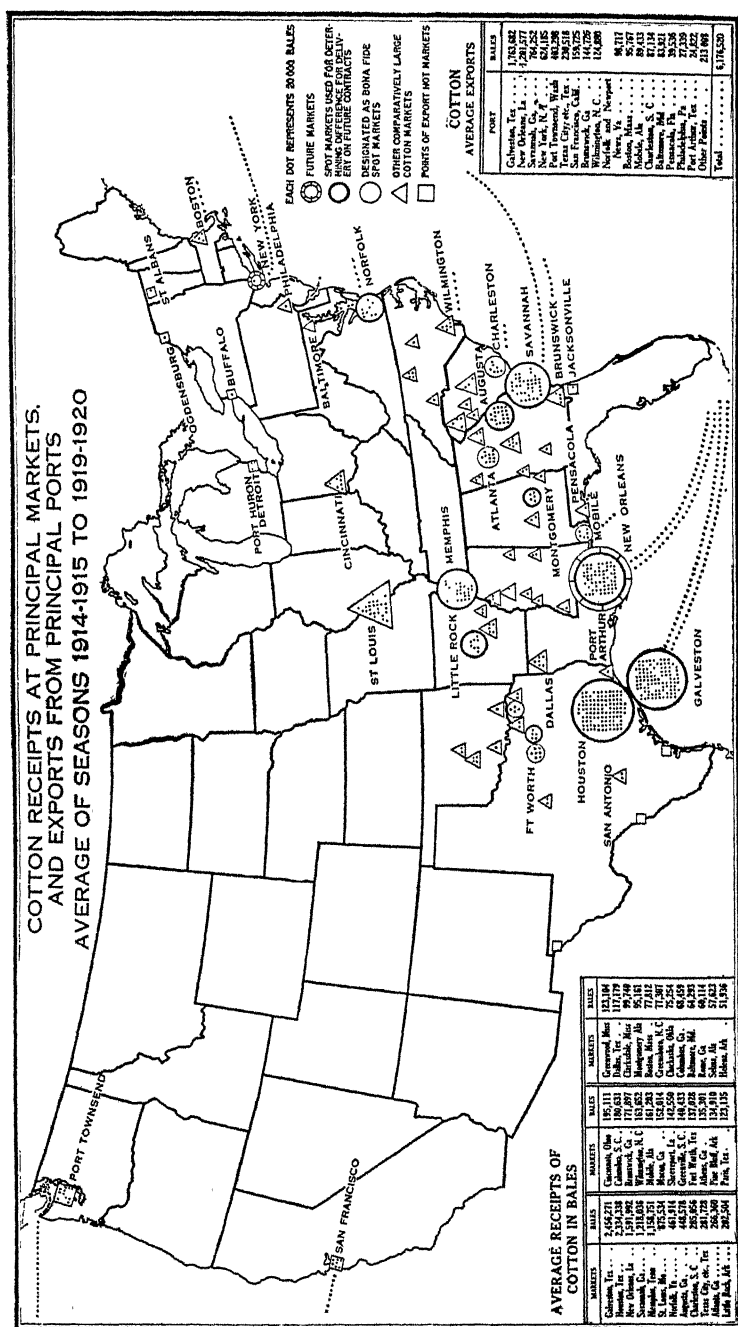


FIG. 41.—Cotton markets are "spot markets" to the extent they deal in actual cotton on hand, New York and New Orleans are also future markets, the former dealing principally in "futures." Galveston, New Orleans, and Savannah are the most important export points.

Interior markets are large towns and cities where cotton from primary markets is received and sold by primary buyers to merchants or mill agents. Such markets are usually the points of concentration for grading, compressing, assembling in commercial lots, and consigning to destination for consumption.

Export markets.—The cities along the Atlantic and Gulf coasts where cotton is sold and from which it is exported are called export markets. About one-half of the American cotton crop is exported for consumption in foreign mills.

Consuming markets.—Cities or towns in which cotton is purchased for manufacturing are called consuming markets. Boston, New York, and Philadelphia are both export and important consuming markets.

Future markets.—There are future cotton markets or exchanges in New Orleans and New York. The importance of these markets is not indicated by their receipts or exports of cotton, as much of the cotton dealt in never reaches these points. New Orleans is both a spot market and a future market, while New York is primarily a future market. Liverpool is the most important foreign future market dealing in American cotton. There are future exchanges also at Bremen and Havre which deal in American cotton. The classification of all cotton delivered on the New York and New Orleans future exchanges is now done by the United States Department of Agriculture.

Marketing and Prices.

All of the markets are closely connected through the operations of dealers, and the future exchanges stand at the apex of the system, the prices quoted in all the other markets generally being based on the future quotations. (See Fig. 42.) When the harvest season begins, contracts covering a large part of the cotton crop have already been made and are being dealt in daily upon the future exchanges. While dealing in futures may be used for speculation, under normal conditions its chief use is for hedging, a means of insurance against loss and also for the stabilization of prices. The spinner who has made a contract to deliver cotton goods sometime in the future orders cotton from a responsible dealer, who "hedges" against a rise in the price of cotton, generally by buying a contract for it upon a future exchange.

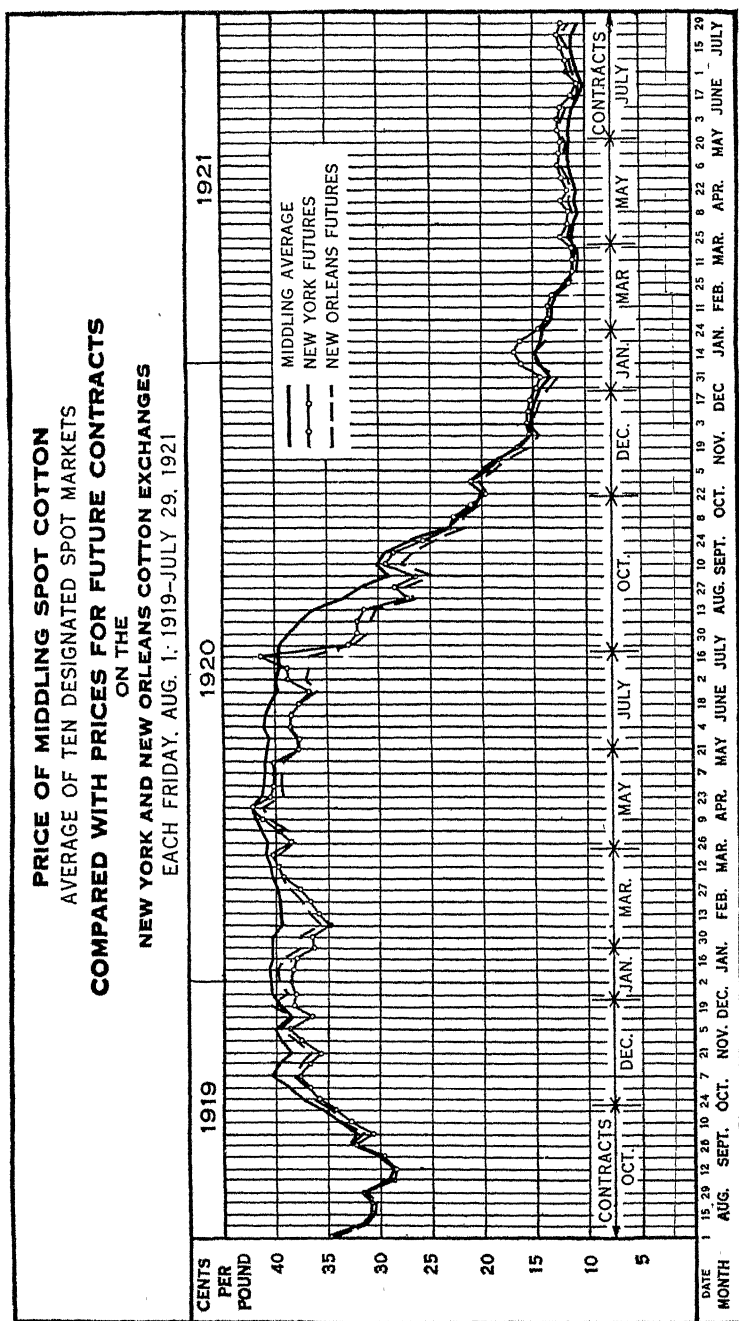


FIG. 42.—This chart shows the relation of price quotations for future contracts to the price of "spot cotton." Note that from September, 1919, to October, 1920, the spot price was nearly always higher than the future quotations, whereas from November, 1920, to July, 1921, the futures were generally above the cash.

On the other hand, the dealer who is buying or expects to buy cotton on the primary or other markets may "hedge" against a fall in prices by selling a contract for it upon a future exchange at a price sufficient to insure him against loss or even to make a profit. The purchase of cotton in quantity for any purpose without hedging would be considered such speculation that banks would not finance the deal. Dealers on the future cotton exchanges keep daily watch on the demand for cotton in all the important consuming markets and upon the conditions as to production and movement of cotton for the purpose of forecasting prices as far ahead as possible. Their forecasts guide them in their activities in buying and selling contracts for future delivery and the quotations of sales as they are made followed closely by dealers in the actual cotton on all spot markets.

Marketing cotton.—Buyers become active in the primary markets as soon as ginning begins. Some cotton is grown under mortgage and is sold promptly in order to meet pressing financial obligations. Where only small quantities of cotton are grown, it is usually sold to the ginner or local merchant in the nearest town or village. Through the center of the Cotton Belt the tenants on plantations, usually having pledged their crops in advance, sell at once to the owners of the plantations, or, subject to the lien, to merchants or buyers. With many producers, however, the time of selling is largely a matter of choice.

When cotton is bought in greater quantities than can be moved or consumed at once, the purchaser must bear the expense of storage and risk of loss, and he, therefore, pays the producer a lower price for it. On the other hand, the producer who can hold his crop must consider the expenses of storage, insurance, and interest on money involved in estimating the advantages of holding. It may be that in some cases the buyer can hold at less expense than the farmer and can afford to pay such a price that the farmer would lose by holding. Many successful farmers have adopted the fixed policy of selling a portion of their crop promptly and holding the remainder for sale as conditions and circumstances seem to warrant. The cotton sold under stress and of free choice soon after ginning forms a large percentage of the total crop. (See Fig. 40.)

It requires some time to assemble the cotton at the large primary and interior markets and to ship it to points of export and of consumption. Dealers move some of it as rapidly as possible, but hold some in storage at interior markets and concentration points so that they may deliver to spinners throughout the year. Spinners, as a rule, do not carry a very large supply of cotton on hand. The operations of the future exchanges enable dealers through hedging to buy and hold the cotton many months or to ship it a long distance without undue hazard from changes in prices.

Prices.—The basis for price quotations upon all the markets is the quotation for Middling on the nearest active future month upon the future exchanges. (See Fig. 43.) At each primary market a deduction from the price quotations must be made to cover expenses of handling and transportation. If there are many buyers on the market, grading may be fairly close and the prices paid close to the limit that will allow a reasonable profit to the buyer.

Prices in the large primary and interior markets are determined as in the smaller primary markets. However, grading has become standardized in these markets, and at each market the grades above and below Middling are settled for according to the differences prevailing in that market. The differences in price between Middling and the other grades and the premiums for the longer staples vary from time to time because of special demands or the effects of the season upon the supply of the different grades and lengths of staple.

The basis grade in future contracts is Middling and the price stated in the contracts is for that grade. When grades other than Middling are delivered the receiver pays for these grades so much above or below the contract price as the grades delivered are worth. Under the United States cotton futures act certain bona fide spot markets, designated by the Secretary of Agriculture, report daily to the future exchanges in the United States and to the Secretary of Agriculture the prevailing prices for Middling and the other grades "on" and "off" Middling (above or below Middling). New Orleans being also a spot market the differences in prices between Middling and the other grades of spot cotton in that market are used in determining the prices of cotton other than Middling when they are delivered on a

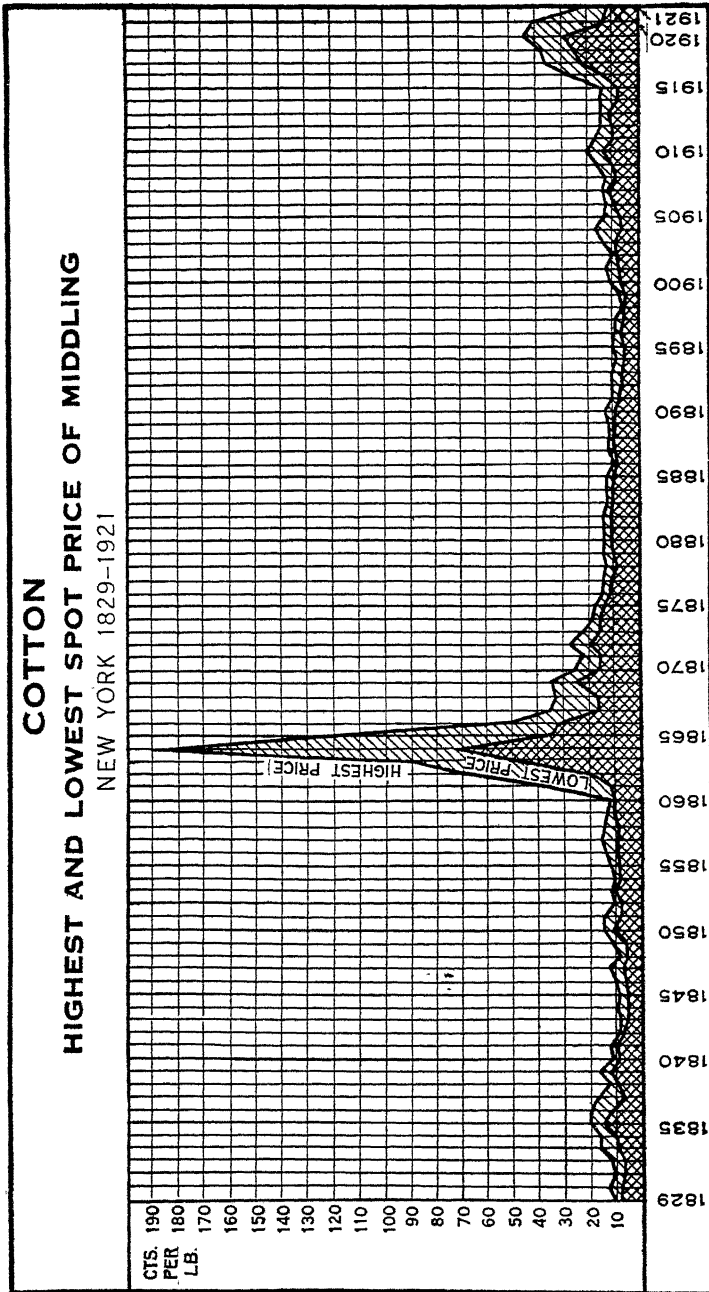


FIG. 43.—In the period of the recent war the price did not rise as high as in the Civil War period. One reason being that production continued and there was always available a good supply, whereas in the earlier period very little was produced and almost no cotton was available.

future contract in that market, whereas under the cotton futures act the New York cotton exchange uses the average differences "on" or "off" Middling as reported by the bona fide spot markets designated by the Secretary of Agriculture.

Transportation.

On the primary markets the miscellaneous assortments of grades and lengths of staple produced by the growers of cotton are purchased and forwarded to the interior markets, where they are assorted and assembled into lots, even running as to grade and other character, and offered to the purchasing agencies of the mills. Before forwarding to the mills, however, the cotton is compressed so as to conserve freight and mill storage space and to economize on freight charges.

APPROXIMATE DIVISION OF THE LIVERPOOL VALUE OF A BALE OF COTTON
ON JULY 1, 1913, 1918, 1920, AND 1921.

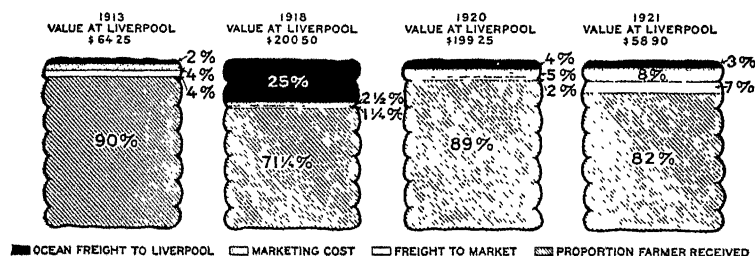


FIG. 44.—The farmer's share of the final market value of a bale of cotton varied greatly from time to time through the late war period. The cost of ocean transportation was large during the war but has shrunk nearly to the prewar share, whereas the rail transportation share has largely increased since the war.

Where there are no facilities for compressing the cotton at point of origin railroads accept it and have it compressed in transit. The charge for compressing averages about 12 cents per hundred weight. Additional charges are made for patching. These charges are added to the freight charges and collected by the railroad company. To secure through shipping rates all cotton is shipped to concentration points with reshipment privileges. When the cotton is to be re-shipped the owner surrenders his receipts and it is forwarded to destination on the rate quoted from point of origin.

The Consumption of the Cotton Crop.

Approximately half of the crop is consumed in this country and the remainder is exported. In recent years mills in the cotton-growing States have taken more than half of the total quantity remaining in this country for consumption. Linters are mostly consumed at home. The tendencies are to expand the cotton manufacturing industries of the South and to manufacture more and more of the cotton near where it is grown.

Statistics and charts showing the annual distribution of the cotton crop of the United States follow.

Consumption of cotton in the United States, 1896-97 to 1920-21.

[Bales.]

Year.	United States	All other States.	Cotton-growing States.	Year.	United States.	All other States.	Cotton-growing States.
1896-97 . . .	3,472,398	.....	.....	1909-10 . . .	4,621,742	2,388,236	2,233,506
1897-98 . . .	3,672,097	.....	.....	1910-11 . . .	4,498,417	2,249,282	2,249,135
1898-99 . . .	3,687,253	.....	.....	1911-12 . . .	5,129,346	2,493,468	2,635,878
1899-1900 . .	3,873,165	2,349,997	1,523,168	1912-13 . . .	5,483,321	2,621,578	2,861,743
1900-1901 . .	4,080,287	.....	.....	1913-14 . . .	5,577,408	2,652,114	2,925,294
1901-02 . . .	4,187,076	.....	.....	1914-15 . . .	5,597,362	3,026,969	2,570,393
1902-03 . . .	3,980,567	.....	.....	1915-16 . . .	6,397,613	2,870,085	3,527,528
1903-04 . . .	4,523,208	.....	.....	1916-17 . . .	6,788,505	2,900,157	3,888,348
1904-05 . . .	4,877,465	.....	.....	1917-18 . . .	6,566,489	2,869,391	3,697,098
1905-06 . . .	4,909,279	2,535,702	2,373,577	1918-19 . . .	5,765,936	2,566,909	3,199,027
1906-07 . . .	4,984,936	2,573,943	2,410,993	1919-20 . . .	6,419,734	2,836,815	3,582,919
1907-08 . . .	4,539,090	2,351,994	2,187,096	1920-21 . . .	4,892,672	1,895,201	2,997,471
1908-09 . . .	5,091,534	2,581,321	2,510,213				

The statistics given in the above table were compiled from reports of the Bureau of the Census. Those for the period 1896-97 to 1913-14, inclusive, are for the 12 months ending August 31. Those for the period 1914-15 to 1920-21, inclusive, are for the 12 months ending July 31. Those for the years 1896-97 to 1904-5, inclusive, except the year 1899-1900, are for equivalent 500-pound bales. Those for the year 1899-1900 and for the period 1905-6 to 1920-21, inclusive, are for running bales, except that round bales are counted as half bales and foreign cotton in equivalent 500-pound bales. Linters are included for the years 1896-97 to 1907-8, inclusive, but are excluded for the years 1908-9 to 1920-21, inclusive.

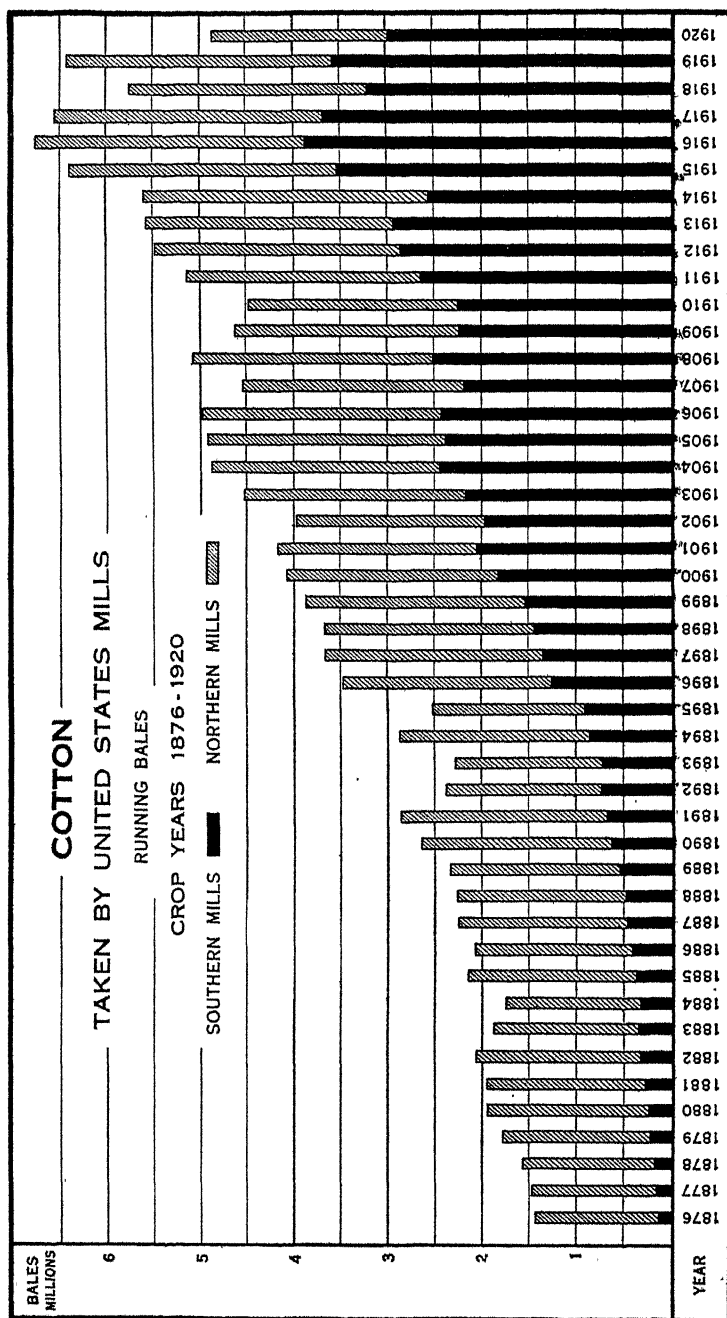


FIG. 45.—The consumption of raw cotton by the mills of the United States increased constantly from 1876 to 1916. The business depression last year caused a great reduction in mill consumption. The southern mills now use more than half the amount consumed in the United States.

The consumption of linters in the United States, by seasons, for the seasons 1908-9 to 1920-21 is given below. The figures for the seasons 1908-9 to 1913-14, inclusive, are for the 12 months ending August 31. Those for the seasons 1914-15 to 1920-21, inclusive, are for the 12 months ending July 31.

Linters consumed.

[Bales.]

Year.	United States.	Cotton-growing States.	All other States.	Year.	United States.	Cotton-growing States.	All other States.
1908-9....	149,185	43,584	105,601	1915-16....	880,916	449,602	431,314
1909-10....	177,211	58,827	118,384	1916-17....	869,702	446,659	423,043
1910-11....	206,561	79,352	127,209	1917-18....	1,118,840	716,954	401,886
1911-12....	238,237	76,345	161,892	1918-19....	457,901	291,981	165,920
1912-13....	303,009	98,775	204,234	1919-20....	342,473	131,484	210,989
1913-14....	307,325	98,121	209,204	1920-21....	516,307	154,483	361,824
1914-15....	411,845	166,384	245,461				

Supply and distribution of cotton in the United States.

[Linters are included for the years 1905-6 to 1912-13, inclusive, but are excluded for the years 1913-14 to 1920-21.]

Year.	Supply.			Distribution.		
	Production, running bales, except round bales counted as half bales.	Carry over from previous year.	Imports, equivalent 500-pound bales.	Exports, running bales, except round bales counted as half bales.	Consumption, running bales, except round bales counted as half bales.	Stocks on hand at end of year.
1905-6.....	10,656,498	1,934,548	133,464	6,763,041	4,909,279	1,349,139
1906-7.....	13,097,992	1,349,139	202,733	8,503,265	4,984,936	1,514,567
1907-8.....	11,527,833	1,514,567	140,869	7,573,349	4,539,090	1,236,058
1908-9.....	13,418,144	1,236,058	165,451	8,574,024	5,240,719	1,483,585
1909-10.....	10,350,978	1,483,585	151,395	6,339,028	4,798,953	1,040,040
1910-11.....	12,384,248	1,040,040	231,191	7,781,414	4,704,978	1,375,031
1911-12.....	16,068,936	1,375,031	229,268	10,681,758	5,367,583	1,776,885
1912-13.....	14,159,078	1,776,885	225,460	8,800,966	5,788,330	1,648,438
1913-14.....	13,659,167	1,510,606	265,646	8,654,958	5,577,408	1,447,817
1914-15.....	15,905,840	1,365,864	363,595	8,322,688	5,597,362	3,936,104
1915-16.....	11,068,173	3,936,104	420,995	5,895,672	6,397,613	3,139,709
1916-17.....	11,363,915	3,139,709	288,486	5,302,848	6,788,505	2,720,173
1917-18.....	11,248,242	2,720,173	217,381	4,288,420	6,566,489	3,450,188
1918-19.....	11,906,480	3,450,188	197,201	5,592,386	5,765,936	4,286,785
1919-20.....	11,325,532	4,286,785	682,911	6,545,326	6,419,734	3,563,162
1920-21.....	13,270,970	3,563,162	226,321	5,673,452	4,892,672	6,590,359

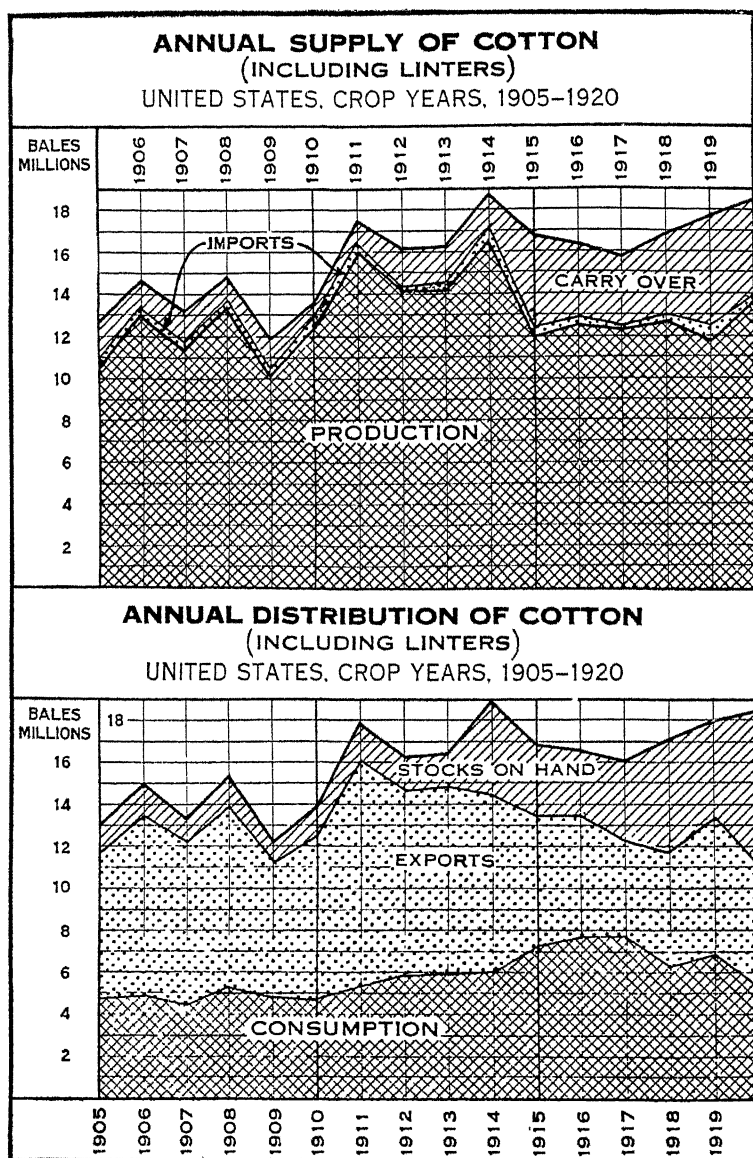


FIG. 46.—In recent years the carry-over from one crop season to another has been large. The total amount available for the year 1920-21 was greater than for any previous year except 1914-15. Before the war the United States annually exported more cotton than was consumed, but since 1914 exports have been less than home consumption.

Supply and distribution of linters in the United States.

[Figures for each season are for the 12 months ending Aug. 31, during the season 1905-6 to 1913-14, inclusive, and for the 12 months ending July 31, during the season 1914-15 to 1920-21.]

Year.	Supply.			Distribution		
	Production, running bales, except round bales counted as half bales.	Carry over from previous year.	Imports, equivalent 500-pound bales.	Exports, running bales, except round bales counted as half bales.	Consumption, running bales, except round bales counted as half bales.	Stocks on hand at end of year.
1905-6.....	230,497	.....	.....	.....	.....	.....
1906-7.....	322,064	.....	.....	.....	.....	.....
1907-8.....	268,060	.....	.....	.....	.....	.....
1908-9.....	346,126	.....	.....	.....	119,185	.....
1909-10.....	313,478	.....	.....	.....	177,211	.....
1910-11.....	397,628	.....	.....	.....	206,561	.....
1911-12.....	556,276	.....	.....	.....	238,237	.....
1912-13.....	602,324	.....	.....	.....	303,009	137,832
1913-14.....	631,153	137,832	.....	259,881	307,325	181,584
1914-15.....	832,401	181,584	.....	221,875	411,845	388,786
1915-16.....	944,640	388,786	.....	295,438	880,916	263,547
1916-17.....	1,300,163	263,547	.....	436,161	869,702	453,659
1917-18.....	1,096,422	453,659	.....	187,704	1,118,840	439,917
1918-19.....	910,236	439,917	.....	71,534	457,901	868,897
1919-20.....	595,093	868,897	.....	53,021	342,473	1,009,650
1920-21 ¹	439,637	1,009,650	.....	51,132	516,307	654,293

¹ Subject to possible correction

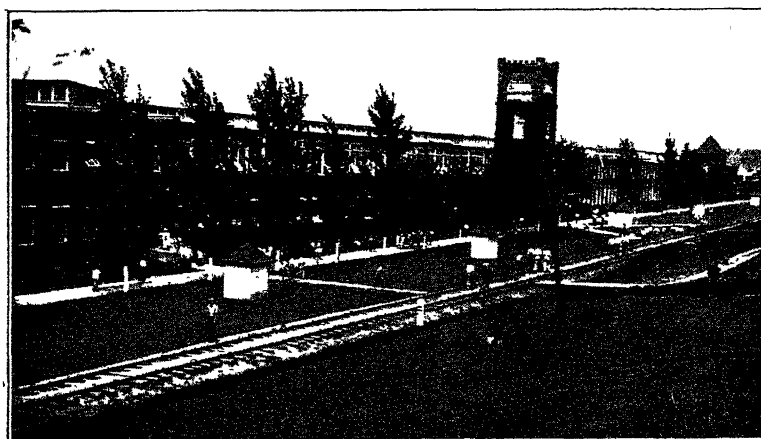


FIG. 47.—Noon hour at a modern southern cotton mill.
99912°—YBK 1921—26

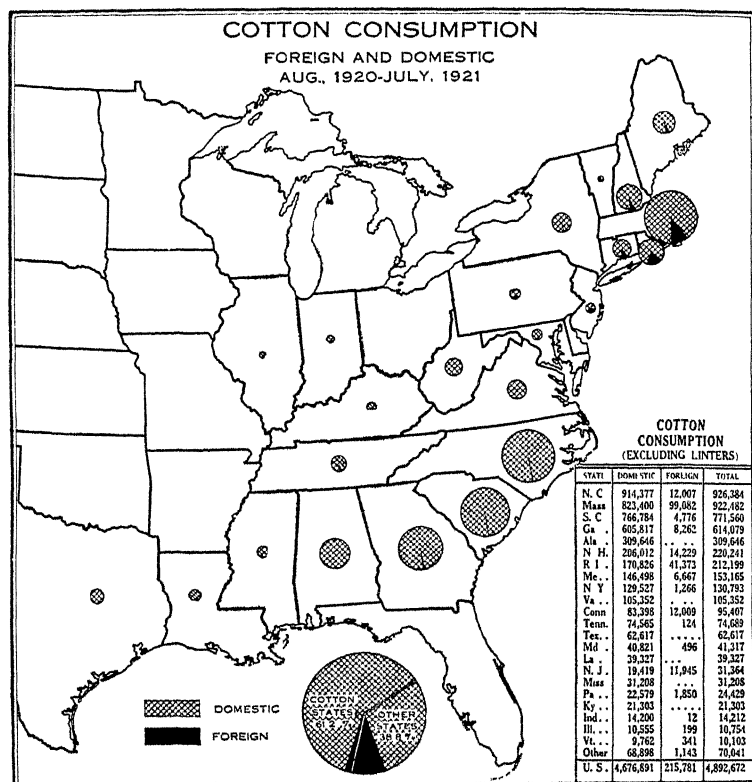


FIG. 48.—The mills in the cotton-growing States took 61 per cent of the total taken by the United States mills. Massachusetts, North Carolina, South Carolina, and Georgia are the leading States. Most of the foreign cotton was taken by the mills of New England.

Cotton Exports.

The average annual exports of cotton previous to the late war were about 60 per cent of the crop. During the war period the United States consumed the larger proportion of the crop produced. In some years more than one-half the crop was consumed by the mills in this country. The economic depression of last year resulted in a reduction of the mill consumption at home. Exports were also reduced, leaving an unusually large carry over, 6,590,000 bales, or one-half of the production.

The movements of cotton through ports and to foreign countries are indicated by the accompanying charts. The

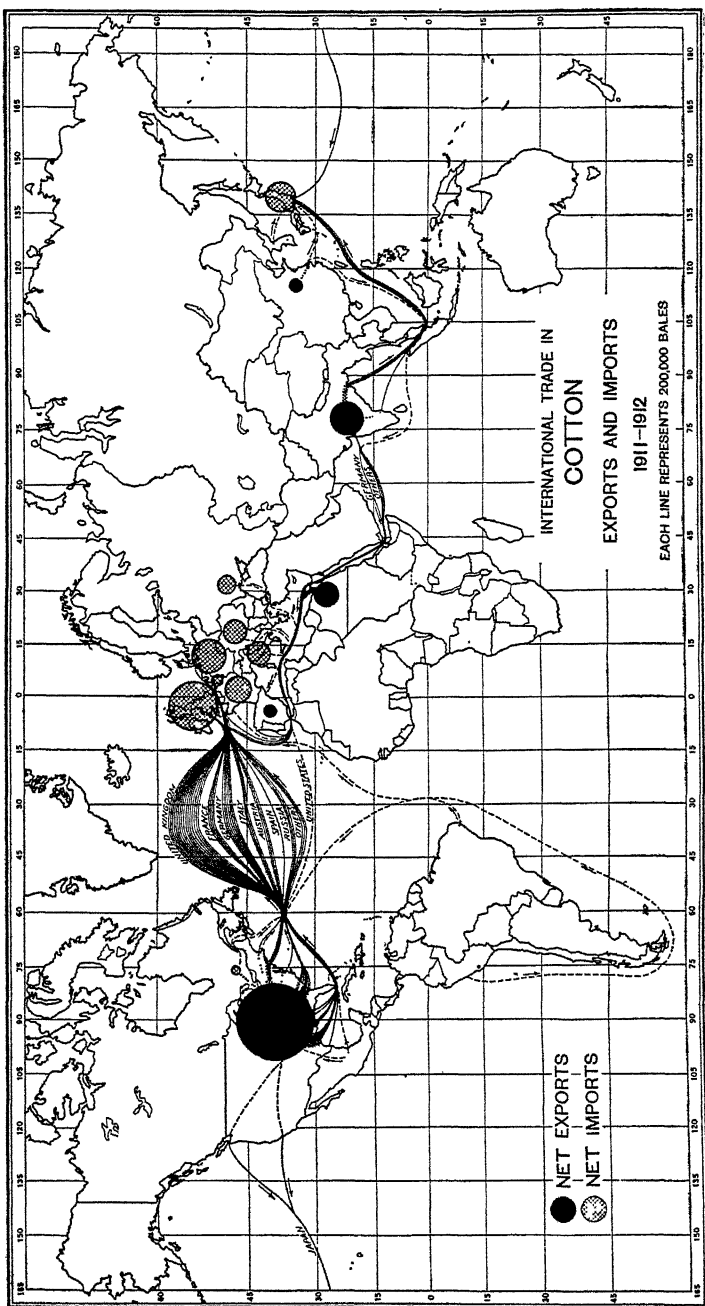


FIG. 49.—The predominant position of the United States in the international cotton trade is graphically shown in this chart.

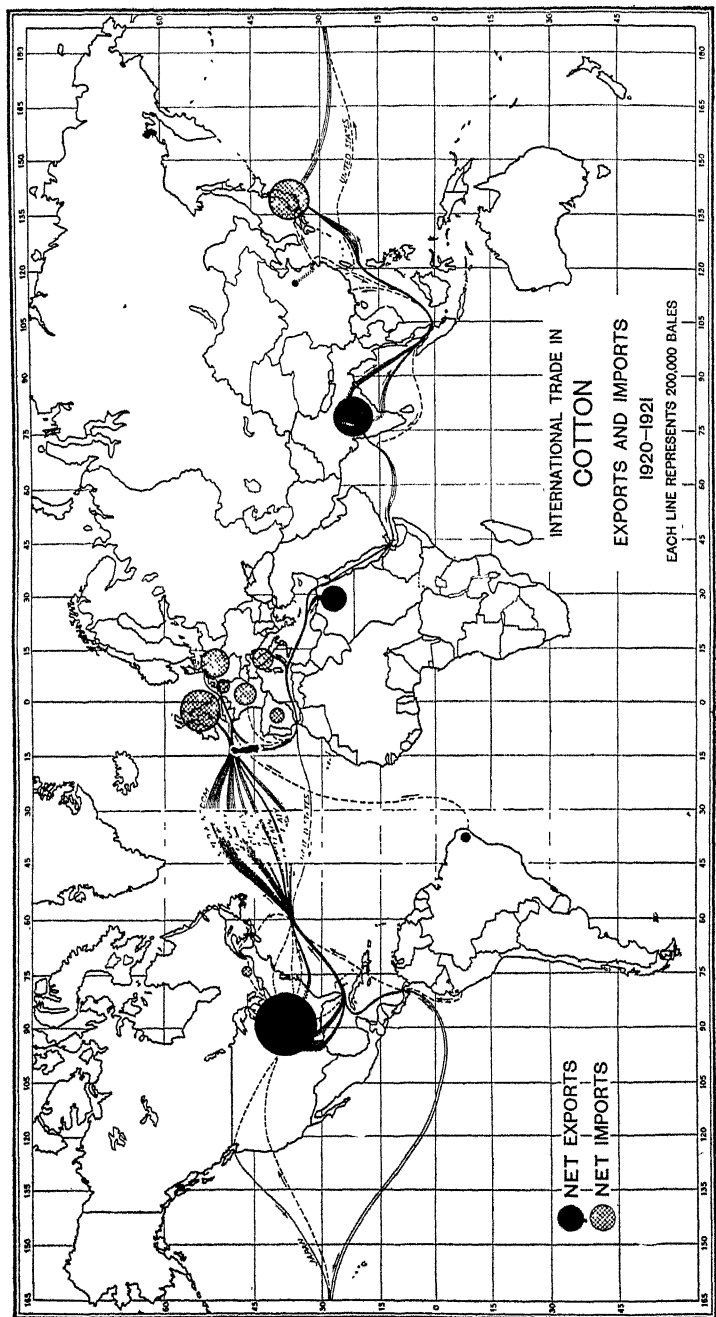


FIG. 50.—Note the changes in movements between the pre-war period and last year. Austria-Hungary and Russia were out of the market last year. Only Japan shows enlarged imports.

war disturbed cotton movements by making transportation expensive and shutting out from our markets some of the foreign countries that were taking cotton. On the other hand, in Japan there has been a great increase in the manufacture of cotton, and Japan has become one of the most important markets for the raw cotton of the United States.

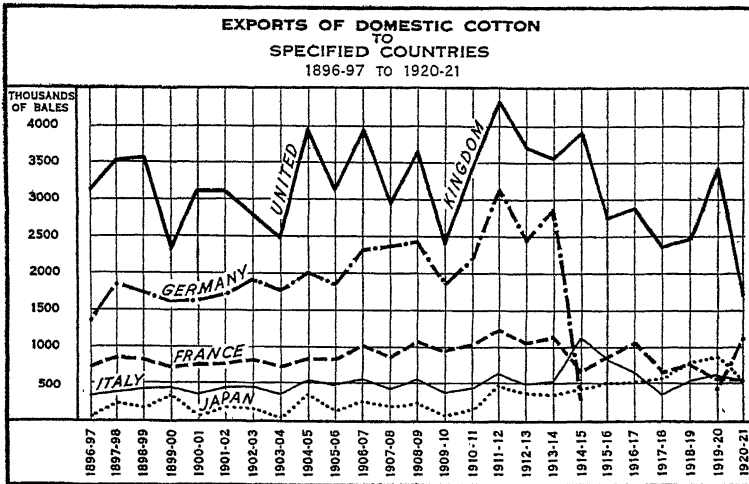


FIG. 51.—The United Kingdom is the best customer of the United States; Germany was second. Japan is becoming one of the principal importers of American cotton. In recent years there has been a very rapid expansion of manufacturing in Japan.

Utilization of Cotton Seed.

The utilization of the cotton seed has become an important economic factor in the production of cotton. At first planters commonly considered all of the seed as waste material, except that used for planting, but as soon as they began to give some attention to maintaining the fertility of their soils they found the seed valuable fertilizing material. Before the Civil War experiments were being made in feeding the seed to live stock and crushing it for oil. In 1859 there were seven establishments in the United States engaged in the manufacture of cottonseed products. After the Civil War there was a great demand for fertilizers in the eastern States of the Cotton Belt, and the cotton seed was almost universally used for this purpose. In 1875 refined cottonseed oil was put on the New Orleans market, and since then

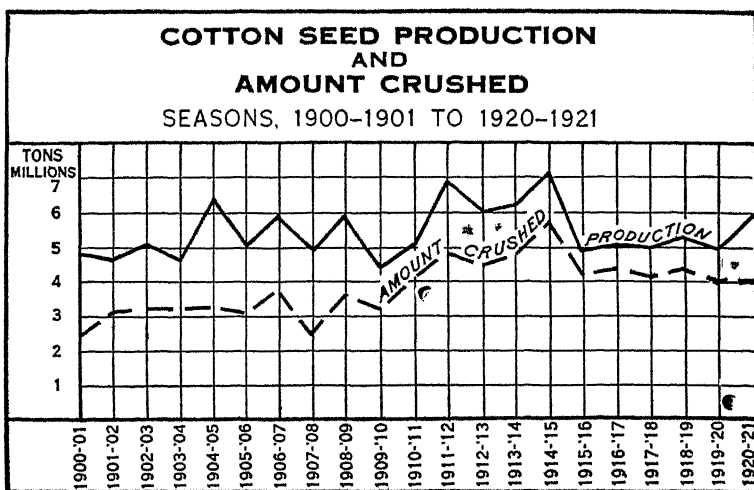


FIG. 52.—The amount of cotton seed produced, of course, varies with the cotton crop. Recently developed valuable uses for the seed products and high prices for the seed have caused an increasing proportion of the production to be crushed.

the cottonseed oil industry has developed with remarkable rapidity. Increased demand for the various products of the crushed seed has greatly increased the value of the seed.

Deterioration in Quality of the American Cotton Crop.

According to the testimony of the cotton trade in Europe as well as in the United States, the quality of the American cotton crop has deteriorated in recent decades. This can be understood when account is taken of the general custom among the American growers of planting many different varieties in the same locality, the crossing of these varieties in the field, mixing the seed at the public gins, and the general use of this ordinary "gin-run" seed for planting.

The extent of mixing of seed at gins has not been appreciated. Recent experiments have shown that modern ginning machinery retains a large amount of seed from each customer and passes it on to the next. No less than 26 per cent of the seed delivered to the farmer at public gins, as ordinarily operated, may be seed of another variety ginned for the previous customer. It is apparent that if such seed is planted there must be a vast amount of mixing in the field, and deterioration begins.

The degeneration that results from crossing in the field no doubt is the basis for the popular idea that cotton varieties "run out" in a few years and that "fresh seed" must be brought in from other districts. The fact is, however, that locally selected seed of good varieties has proved better than the new stock and some of the best-known varieties have been grown continuously in the same districts for many years, with no indication of "running out" as long as isolation, selection, and clean ginning are maintained.

Lack of discrimination on the part of buyers in the primary markets is also a serious factor in the deterioration in quality of the American cotton crop, and failure on the part of buyers to recognize superior quality when dealing with the growers has had the natural effect of leading farmers to believe that the most desirable character that a cotton variety can have is that of giving a high percentage of lint or "large out-turn at the gin." Most of the varieties with high lint percentages produce short and inferior fiber and have small seeds, yielding a low percentage of oil, but such varieties are likely to be planted so long as the farmer receives as much for three-quarter or seven-eighths inch cotton as he does for 1-inch cotton.

Danger from Foreign Competition.

Very active efforts are already being made to establish or to extend the production of cotton in many foreign countries. Though such efforts in the past have not resulted in serious injury to the cotton industry of the United States, every season of high prices stimulates greater activity in other countries. Disturbed conditions during the war period resulted in the suspension of some of these efforts, but there is every possibility that important centers of cotton production will be developed in other parts of the world within the next few years.

Many representatives of foreign governments have come to the United States in the last few years to study the American cotton industry. They have come from Russia, China, Japan, India, the British colonies in Africa, Brazil, Argentina, Peru, and other countries. Foreign governments are also employing American experts and are purchasing large supplies of seed of improved American varieties.

The effect of such competition abroad will be felt first by the American producers of low-quality, short-staple cotton. Manufacturers in the United States had begun to import inferior cotton from India and China before the war, and though such importations may not become a regular custom, in any event they call attention to the fact that fiber of inferior quality is already being produced in foreign countries more cheaply than in the United States.

Since a large part of the American cotton crop is exported to other countries, the only adequate protection against foreign competition is to improve our own industry by growing better cotton and by growing it more cheaply than other countries are able to do, notwithstanding lower wages of farm labor.

Improvement Through Utilization of Better Varieties.

Fortunately the American cotton farmer is not limited to the production of inferior fiber, even under boll weevil conditions. Instead of preventing the use of better varieties of cotton, the presence of the boll weevil makes the improvement of varieties still more important than ever before. In fact, the better methods of preparing and cultivating the land made necessary by the boll weevil provide more favorable conditions for the production of superior fiber.

There is available a series of early and prolific Upland varieties of cotton-producing fiber from 1 to 1½ inches long, which are adapted to a wide range of conditions in the American Cotton Belt. With such varieties available, there are no agricultural reasons for continuing to produce cotton of less than 1-inch staple in the United States, and there does not appear to be any industrial or economic reason for continuing to produce the short and inferior fiber that now forms a large proportion of the American cotton crop.

Importance of One-Variety Communities.

Full utilization of improved varieties of cotton is possible only in communities devoted to the production of a single variety. Where communities are united upon a single superior variety of cotton and supplies of pure seed are maintained many of the farming problems are simplified. Cot-

ton growing is discussed with interest and profit at farmers' meetings because everybody has had experience with the same variety of cotton. With a full understanding of the behavior of one variety, methods are adjusted more closely to differences in soil, season, and time of planting, as well as to the control of insect pests and diseases, labor supplies, ginning, handling, warehousing, financing, and marketing of the crop.

The most rapid progress in American cotton culture has been made the last few years in the Salt River Valley of Arizona, where only the Pima variety of Egyptian cotton is grown. Single-variety communities are also developing rapidly in Texas, Oklahoma, California, and other States where millions of dollars in premiums have already been paid to farmers for superior cotton. Such progress is not possible in communities growing different kinds of cotton, where farmers usually ascribe their success or failure to the quality of the seed.

The essential feature is that the community should agree upon the planting of one variety of cotton and take measures for maintaining the purity and uniformity of the stock by continued selection under the local conditions. This would mean larger crops, better fiber, and higher prices, not only because of the improved quality, but also because each community would be able to produce a commercial quantity, a hundred bales or upward, of the same uniform type of cotton.

Cooperative Warehousing and One-Variety Communities.

Realization of the enormous benefits to be derived from cooperative warehousing of cotton has led to the rapid organization in all of the principal cotton-growing States of farmers' associations to finance the building of centralized, fire-proof warehouses for the proper storage and handling of their crop. Through such associations the farmer secures protection for his fiber from damage by fire or weather, his crop is marketed in an orderly manner, and a fair price is assured for the quality of cotton he produces.

Full benefits of such associations can not be realized, however, in communities growing many different varieties of cotton. Though the progressive farmer producing a superior

staple from selected seed may receive a premium for his cotton the first year of two, there would be no possibility of maintaining the high standard of his crop so long as his neighbors persisted in growing inferior cotton and ginning their crops on the same gin. Nor is it possible to receive a full price unless the superior fiber is available in the large commercial quantities that manufacturers require, and only one-variety communities can produce.

It is only in communities devoted to the growing of a single, superior variety and maintaining its quality and uniformity by persistent selection that full benefits may be realized from cooperative warehousing and a real improvement in the quality of the American cotton crop assured.

Summary of the Situation and Outlook.

The short crop of 1921 plus the large carry-over from 1920 gave the world a sufficient supply of cotton for the year 1921-22. Had there not been a very large carry-over from the crop of 1920 the low production of 1921 would have resulted in very high prices for cotton. Ordinarily a short crop in the United States should result in high prices, which would in some measure offset low yields. But the extraordinarily large carry-over from the crop of 1920 resulted in low prices to farmers with a very small crop. The situation was made worse by the industrial depression, which greatly reduced the demand for cotton by the mills of the United States as well as by manufacturers in foreign countries. In addition to these difficulties the South was further oppressed by high prices for fertilizers and high prices for almost everything else that the southern farmer had to buy. Notwithstanding that corn and other farm products in the North were very cheap southern farmers had to pay good prices for these products in the South because of the increased transportation costs. Taken together all of these factors produced a severe economic depression in the South.

Of course it is not expected that these conditions will continue long. The revival of the cotton-manufacturing industry in this country is strengthening the demand for cotton. There is reason to hope that the economic condition of foreign countries will also improve, so that the cotton-manu-

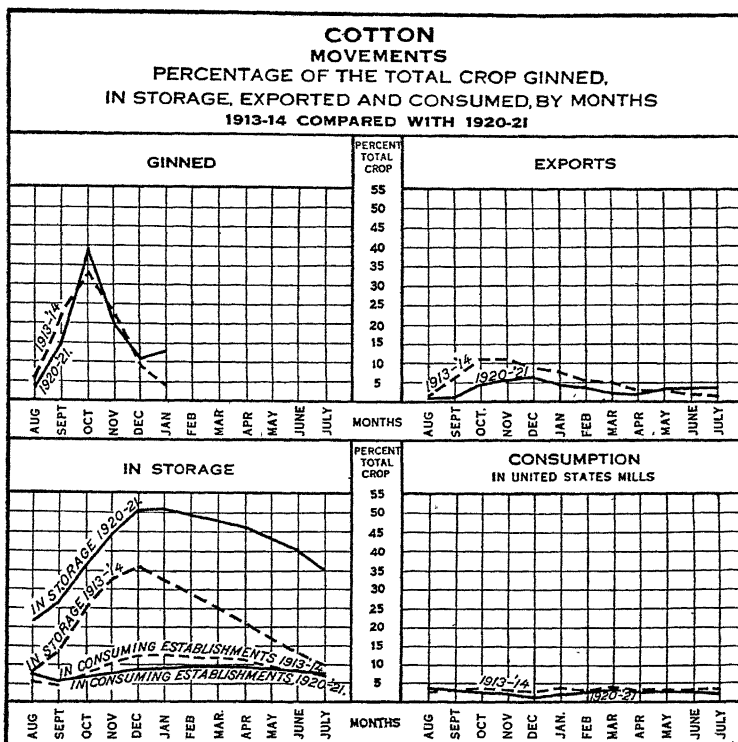


FIG. 53.—Ginning begins in July and ends in February; the amount in storage increases from August to December, inclusive; exports increase August to October or November; consumption in the United States mills is quite regular throughout the year. Movements last year differed from the pre-war average principally in the stocks in storage, which was largely owing to the unusually large carry-over from the previous year.

facturing industries will revive and the demand for goods manufactured in this country will increase. The burden upon the farmer of the South in making his purchases in the North has been somewhat lessened by a slight reduction in freight rates. Reductions in wages and in prices of things the farmer buys to produce the crop will result in a reduction in the cost of the crop. The carry-over of cotton from 1921-22 is much less than in previous years, so that unless there is a very large new crop of cotton to add to this carry-over the supply at the beginning of the year will be considerably less than the supply last year. Already the prospect for a reduction in supply and an increase in demand has resulted in better prices. The boll weevil continues

to be a very destructive pest, which there is as yet no prospect of eliminating. Farmers who have been in contact with it for some time have learned to reduce somewhat its destructiveness. Until more adequate measures of control or destruction of the pest have been developed it may be expected that the boll weevil will continue to do enormous damage to the crop from year to year, varying in destructiveness with the character of the season.

A GRAPHIC SUMMARY OF AMERICAN AGRICULTURE BASED LARGELY ON THE CENSUS OF 1920

By O. E. BAKER. *Agricultural Economist, Bureau of Agricultural Economics.*

Introduction.

FOUR COUNTRIES are preeminent in quantity of agricultural production—the United States, Russia, China, and India—and at present the production of the United States is considerably greater than that of any other nation. The aggregate value (United States value) of the agricultural products of the Russian Empire just prior to the war was only about two-thirds that of our Nation, while the production of foods and fibers in China, which can only be guessed at, is probably also about two-thirds and certainly not over three-fourths that of the United States. The agricultural production in India is less than half that of our Nation. Only the British commonwealth of nations as a whole—India, Australia, New Zealand, South Africa, Canada, and the British Isles—approaches the United States in quantity of agricultural production, with an aggregate about nine-tenths that of the United States.

The United States is not only the leading nation in agricultural production, but also it leads all nations in exports of agricultural products. The teeming populations of China and India require practically all the food produced and most of the fiber for home consumption, but in normal times Russia has ranked with the United States in value of agricultural exports. War, revolution, and crop failure, however, have transformed Russia into a nation unable to feed its own people. Since the war the value of agricultural exports from the United States has exceeded the aggregate value of those from all other nations in the world. Yet the agricultural exports of the United States at present are only one-eighth of its production.

This vast agricultural production of the United States requires the labor of about one-quarter of our gainfully employed population, whereas 85 per cent of the population of Russia is classed as agricultural, and probably three-fourths of the people of China and of India derive their support from agricultural pursuits. Six and a half million farmers in the United States, assisted by a somewhat

smaller number of farm laborers, probably less than 4 per cent of the farmers and farm laborers of the world, produce nearly 70 per cent of the world's corn, 60 per cent of the world's cotton, 50 per cent of the world's tobacco, about 25 per cent of the world's oats and hay, 20 per cent of the world's wheat and flaxseed, 13 per cent of the world's barley, 7 per cent of the world's potatoes, and 5 per cent of the world's sugar, but only about 2 per cent of the world's rye and rice. Totaling the cereals on the basis of tons, and estimating the production of China as somewhat larger than that of India, it appears that the United States produces about one-fourth of the world's cereal crops. The average production of cereals per person engaged in agriculture in the United States is 12 tons, while for the rest of the world it is only about 1.4 tons.

Nevertheless, the agricultural production of the United States is no longer keeping pace with our increasing population. The peak of production per capita of the total population was reached about 1906 or 1907, and although the decrease in per capita production since has been very slow and is yet very small, it is clearly apparent. This failure of agricultural production to increase as rapidly as population is not due primarily to the decrease in the proportion of our population engaged in agriculture from over 13 per cent in 1910 to about 10 per cent in 1920, according to the census returns¹, for the acreage of crops per person engaged in agriculture was, apparently, 25 per cent greater in 1920 than in 1910; but, instead, is owing mostly to a notable decrease in the rate of expansion of our arable area. Improved land increased only 5 per cent from 1910 to 1920, as compared with 15 to 50 per cent in previous decades, and this 5 per cent increase was practically confined to the precariously productive semi-arid lands of the Great Plains region. The land in the United States suitable for agricultural use without irrigation, drainage, or heavy fertilization is nearly all occupied. Consequently, one of the great questions before the American people is how to maintain the supply of foods and fibers for the increasing population at that high level to which we are accustomed,—should we cultivate the present area of arable land more intensively, or, like England, depend upon imports from foreign countries, or should the Nation embark upon extensive projects of reclamation?

The first part of this Graphic Summary of American Agriculture, therefore, is devoted to a series of maps visualizing in a very generalized way the agricultural regions of the United States, and the

¹ However, as the 1920 census was taken January 1 and the 1910 census was taken April 15, it appears likely that a large number of farm laborers were missed by the enumerators in 1920. Making allowance for this discrepancy, it seems probable that the acres of crops per person engaged in agriculture increased at least one-sixth between 1910 and 1920, and the production even more.

topographic, climatic, and soil conditions which determine these regions; also the location and extent of the land available for reclamation by irrigation, by drainage, and by clearing of forest growth. This first part is concluded by two graphs, one outlining the trend of land utilization in the past, and the other venturing to set limits to the expansion of our arable area in the future. (See Figs. 2 to 18.)

The second part of this study shows the geographic distribution of 50 crops in the United States, according to the census of 1920. For corn, wheat, and cotton both acreage and production are shown; but for other crops acreage only, since acreage affords a better comparison than production of the relative importance of the crops in a region. The total area in crops in 1919 was about 370 million acres, an increase of 50 million acres since 1909. This increase of 13 per cent in crop acreage, as compared with 5 per cent in improved land, indicates that patriotic motives, supported by the high prices paid for farm products during the war and for some time afterward, caused the plowing up and planting to crops of much improved pasture. The trend of land utilization in the United States is toward the more intensive use of the more fertile or favorably situated land—that is, its use for crops; and toward the less intensive utilization of the less fertile or less favorably situated land—that is, its use for pasture and forest. (See Figs. 19 to 71.)

The third part of this article consists of a series of 24 maps showing the geographic distribution of the several kinds of live stock, total and purebred only; also of the production of butter and cheese, wool and mohair. Fully three-fifths of the crop acreage in the United States is used to produce feed for farm animals, or about 225 million acres; and, in addition, our live stock consume the product of about 65 million acres of improved pasture, probably of 150 million acres of unimproved grassland pasture in farms, and 175 million acres of woodland pasture in farms and in our national forests, besides that of perhaps 500 million acres of arid or semi-arid open range land in the West. It seems safe to say that live stock consume two-thirds of the product of the improved land and practically all the product of the unimproved pasture, or fully 80 per cent of the total food and feed produced by tame and wild vegetation in the United States. (See Figs. 72 to 96.)

The last part of this study considers the farm as a whole—the variations in size and value in different portions of the United States; the expenditures for labor, feed, and fertilizer; ownership and tenancy; and, finally, the geographic distribution of country, village, and city populations. Four small maps also are provided, showing the number of farmers having automobiles, tractors, telephones, and running water in the house, as reported by the census

for January 1, 1920. American farms, in general, are different from those in other countries of the world, except Canada, Australia, and South Africa. English farms differ from American farms in that they are nearly all operated by tenants and employ more hand labor. The peasant farms of continental Europe utilize agricultural machinery still less and are much smaller in size than most American farms. The farms of India, China, and Japan are still smaller and are cultivated with only the crudest tools. There are 28 to 30 acres of crops per person employed in agriculture in the United States, as compared with 9 in Russia prior to the war, 7 in France and Germany, and $1\frac{1}{2}$ in Japan. (See Figs. 97 to 124.)

The American farm involves a large investment of capital. This investment is increasing and must increase if the American farmer is to improve his standard of living. The average value of farms in the United States was \$6,444 in 1910, and \$12,084 in 1920. In Iowa, the average value of the farms in 1920 was \$39,941. The area of the crops per farm in the United States increased from 50 acres in 1909 to 57 acres in 1919. Our farmers are driving larger teams, using more efficient machinery, producing more per acre and per person than ever before. Each American farmer and farm laborer, on the average, is feeding nine people other than himself in this country, and one more person living in foreign lands. It is in this increasing productivity of the American farm, amounting probably to 15 per cent in the last decade, that the expenditure for scientific research, for technical education, and for improved economic organization in agriculture finds its justification.

This semicapitalistic American farm, however, is not organized like a factory. The one farm laborer per farm, on the average, is often the farmer's son, or a neighbor's, who eats at the same table with the farmer and expects some time to have a farm of his own. Corporate or communal agriculture is, in general, a failure in the United States. The family farm is practically the universal type. To keep this American farm large enough to support a family according to the American standard of living and supplied with sufficient machinery and working capital for efficient operation is important not alone to our agricultural but also to our national welfare. The characteristic and precious feature of American agriculture is its large production per man, and during the past decade the increase in the productivity of our farms was greater than in any decade preceding. But as population increases and poorer and poorer land is brought into use for crops—that is, as labor becomes more abundant and land becomes scarcer—it appears probable that larger production per acre will become more profitable than greater production per man, and that our agriculture, as well as our standard of living, will more and more resemble that of Europe before the war.

List of Maps and Graphs.

I. THE PHYSICAL CONDITIONS AND USE OF THE LAND.

	Page.
Agricultural regions of the United States.....	413-416
Topography (photograph of land relief model of United States).....	417
Average annual precipitation and length of frostless season.....	418, 419
Soil regions and vegetation regions.....	420, 421
Land in farms, improved land, and land in crops.....	422-424
Improved and unimproved pasture.....	425
Forest and cut-over land, total and potentially agricultural.....	426, 427
Wet land needing drainage; irrigated and irrigable land.....	428, 429
Use of the land, and trend in population and food production.....	430, 431

II. THE CROPS.

Relative importance of the crops and value of all crops.....	432, 433
Cotton acreage and production.....	434
Corn for grain, acreage, production, amount sold; corn for silage and for forage, acreage.....	435-437
Wheat acreage, winter and spring, and total production.....	438-440
Oats, barley, rye, buckwheat, and velvet beans, acreage.....	441-444
Kafir, milo, and other sorghums for grain and for forage, acreage.....	444, 445
Flax, rice, and tobacco, acreage.....	446
Hay and forage, total acreage.....	447
Timothy, clover, alfalfa, and wild hay, acreage.....	448-452
Miscellaneous tame grasses, grain hay, and legume hay, acreage.....	452, 453
Field peas, field beans, and peanuts, acreage.....	454, 455
Potatoes, and sugar crops (beets, cane, sorghum), acreage.....	456, 457
Vegetables for home use, value; and vegetables grown for sale, acreage.....	458, 459
Cabbage, cantaloupes, and watermelons, acreage.....	460, 461
Green peas, sweet corn, and tomatoes, acreage.....	461, 462
Total fruits and nuts, approximate acreage.....	463
Apples, approximate acreage, production, and amount sold.....	464, 465
Peaches, plums and prunes, grapes, citrus fruits, and pears, approximate acreage.....	466-468
Pecans, almonds and walnuts, strawberries, bush fruits and cranberries, approximate acreage.....	468, 469

III. LIVE STOCK.

Relative importance of the farm animals, United States and 20 States..	470
Horses and mules, colts and work stock; purebred saddle and draft horses, number.....	471-474
Cattle, total number; beef, dairy, and purebred, number.....	475-478
Dairy products, total receipts from sales; quantity of butter and cheese made.....	479-482
Swine (hogs and pigs), total and purebred, number.....	483-484
Sheep, total and purebred, number; goats, number; value of wool and mohair.....	484-486
Poultry, number.....	487
Bees, number of colonies.....	488

IV. THE FARMS AND THE PEOPLE.

	Page.
Number of farms, total and of classified sizes.....	489, 490
Average acreage of improved land per farm	491
Value of farm land per acre.....	492
Value of farm property, and of buildings, machinery, and live stock....	493-495
Expenditures for feed, fertilizer, and labor.....	495, 496
Average value of farms.....	497
Relative importance of tenancy from standpoints of proportion of the farms, of the improved land, and of the value of farm property operated by tenants.....	498, 499
Number of farms operated by white and negro owners and tenants.....	500, 501
Country, village, and city population.....	502, 504
Farms having tractors, automobiles, telephones, and water piped into the house.....	505, 506

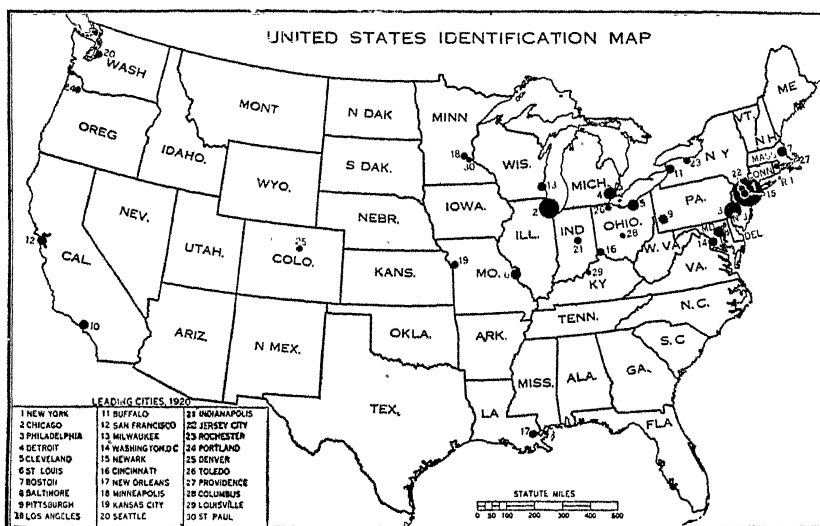


FIG. 1.—This map should be used in connection with all the maps that follow when it is desired to determine the name of a State. The succeeding maps do not show State names, because the letters would interfere with the dots or shading, but the State boundaries are shown and the shape of these boundaries, or location of the State on the map, should be compared with this map to identify the State. The map also shows the location of the 30 largest cities, the names corresponding to the numbers being given in the lower left-hand corner of the map.

The Agricultural Regions.

The United States may be divided into an eastern and a western half, characterized, broadly speaking, one by a sufficient and the other by an insufficient amount of rainfall for the successful production of crops by ordinary farming methods. The North Pacific coast and several districts in California and in the northern Rocky Mountain region constitute exceptions to this statement. The transition zone which separates the East from the West lies, in general, along the one hundredth meridian, the average annual precipitation increasing in this zone from about 15 inches at the Canadian boundary to 25 inches in southern Texas, where the evaporation is much greater and the rainfall more torrential. The East is a region of humid climate farming, based upon tilled crops, small grains, and tame hay and pasture; the West, of wild hay and grazing, dry farming, winter crops in certain localities, and irrigation farming, with only limited areas of ordinary farming under humid conditions such as characterize the East.

The East and West may each be divided into six agricultural regions. In the East, precipitation being usually sufficient, the classification is based largely on temperature and the crops grown, while in the West rainfall and topography are the important factors. In the East the agricultural regions extend for the most part east and west, following parallels of latitude; while in the West the regions are determined by the mountain ranges and extend north and south. Agriculture in the East varies primarily with latitude and soils, but in the West the principal factors are altitude and rainfall. The average elevation of the eastern half of the United States is less than 1,000 feet; that of the western half, over 4,000 feet. (Compare Fig. 2 with Figs. 3 to 16.)

In the East corn is the leading crop, constituting over one-quarter of the acreage and nearly 30 per cent of the value of all crops. It is grown in all the six eastern regions, but is dominant in the Corn Belt, and is very important in the Corn and Winter Wheat Region, and in the Cotton Belt. Along the Gulf of Mexico and the southern Atlantic coast the type of agriculture varies greatly from section to section—from rice farming to sugar cane growing and winter vegetable production, citrus fruit orcharding, and cattle ranching—so that the region is not named after any crop, but is called the “Subtropical Coast,” because the warm water exerts a controlling influence upon climate and crops. In this eastern half of the United States there is scarcely any cotton grown outside the Cotton Belt, very little winter wheat outside the Corn and Winter Wheat Region and adjacent portions of the Corn Belt and Cotton Belt, and prac-

tically no spring wheat outside the Spring Wheat Region. Grass is of greatest importance in the Hay and Pasture Region, where in nearly every county hay and pasture occupy half or more of the improved land. (Compare Fig. 2 with Figs. 21 to 71.)

In the West hay is the leading crop, contributing nearly 37 per cent of the acreage and 26 per cent of the value of all crops in 1919, and the forage obtained by grazing is probably of almost equal value. Alfalfa is the leading hay crop in the Rocky Mountain and Arid Intermountain regions, wild grasses in the Great Plains Region, and grains cut green on the Pacific coast. Wheat contributed 21 per cent of the value of all crops, oats 3 per cent, barley 3 per cent, fruit and nuts 18 per cent, potatoes 4 per cent, and other vegetables 8 per cent in these six western regions. The value of all crops in the western regions, however, constituted in 1919 only 15 per cent of the total for the United States. (Compare Fig. 2 with Fig. 21.)

The contrast between the East and West is not as pronounced in live stock as in crops, except that swine are largely confined to the East, while sheep are much more important in the West. There is a marked distinction, however, in the manner of management, the live stock in the East being fed in the barnyards or fields with shelter at night, while in the West the stock is mostly grazed on the open range. In the East, the Hay and Pasture Region is primarily a dairy area; while the Corn Belt is the center of the beef-cattle and swine industry. In the West, the sheep are generally located in the more arid and the cattle in the less arid areas; while in the North Pacific Region, with its cool, moist climate, similar to that of the Hay and Pasture Region, dairying is again the dominant live-stock industry. (Compare Fig. 2 with Figs. 74 to 96.)

The farms, or "ranches," in the West are, in general, much larger in area than in the East. Owing to the low rainfall in the West, except in the North Pacific Region, the land outside the irrigated and dry-farming districts is used mostly for grazing, and instead of 80 or 160 acres being sufficient to support a family, as in the East, 2,000 to 4,000 acres, or more, are commonly required. In the dry-farming areas half sections of land (320 acres) and sections (640 acres) are normal size farms. In the irrigated districts the farms are no larger in area than in the East. The 80 or 120 acre irrigated farms, however, are often worth as much as the 640-acre dry farms or the 3,000-acre stock ranches. (Compare Fig. 2 with Figs. 97 to 111.)

A larger proportion of the farms in the West are operated by their owners than in the East, owing, doubtless, to the cattle ranching, the more recent homestead settlement, and the larger proportion of fruit farms. The proportion of farms operated by tenants in the western regions ranges from 13 to 23 per cent, except in the Cali-

fornia-Arizona Desert, where irrigated cotton farming increases the proportion to 33 per cent. In the East, on the other hand, over 30 per cent of the farms in the Corn and Winter Wheat Region are operated by tenants; in the Corn Belt over 40 per cent; and in the Cotton Belt over 60 per cent, owing in part to the plantation system and the large negro population. The Subtropical Coast and the Hay and Pasture regions, however, have only 27 per cent and 16 per cent, respectively, of the farms rented to tenants. (Compare Fig. 2 with Figs. 112 to 117.)

The geographic distribution of the rural and urban population is particularly interesting. The rural population is densest in the Cotton Belt, where cotton cultivation and picking require large amounts of hand labor and the acreage per laborer is small; also in the eastern portion of the Corn and Winter Wheat Region, where the rolling to hilly lands and lack of capital discourage extensive use of machinery. The rural population is much thinner in the Corn Belt and the Spring Wheat Region, and is thinnest in the West, except in the irrigated districts and the Pacific coast valleys. Urban population, on the other hand, is concentrated largely in the Hay and Pasture Region of the Northeastern and Lake States, where large manufacturing and commercial cities provide a vast market for the nation's agricultural products. (Compare Fig. 2 with Figs. 118 to 120.)

Information concerning "farm facilities," including tractors, automobiles, water piped into the house, and telephones, was collected by the census in 1920 for the first time. Tractors are found mostly in the Corn Belt, and the Spring Wheat, Great Plains, and South Pacific Regions. Over one-third of the automobiles are in the Corn Belt, where one-half to three-quarters of the farms have such vehicles. Water has been piped into the houses mostly in the Hay and Pasture Region, especially in New England, and in the South Pacific Region. Telephones are more widely distributed than any other of the farm facilities; nevertheless, the map shows a noteworthy concentration in the Corn Belt and the Hay and Pasture Regions. These "farm facilities" are criteria of rural progress and prosperity, and as such their geographic distribution is deserving of consideration. (Compare Fig. 2 with Figs. 121 to 124.)

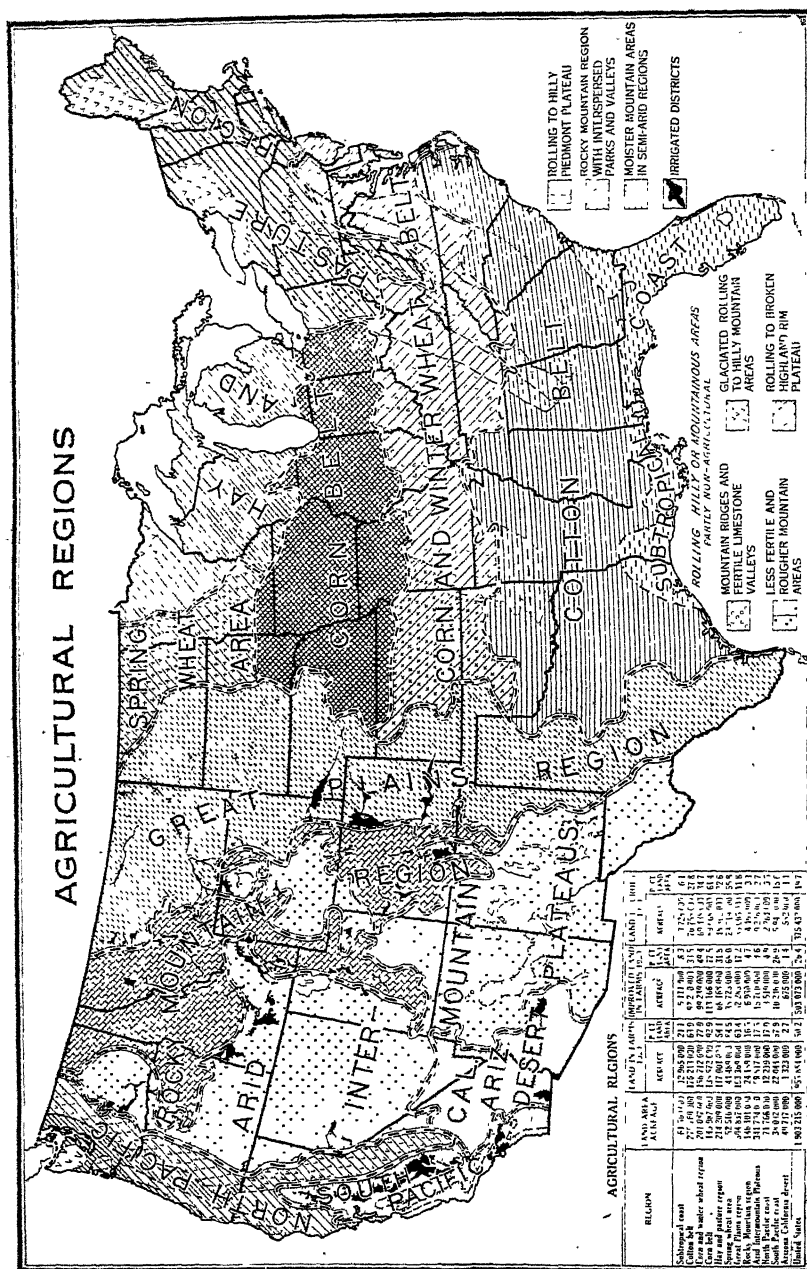


FIG. 2.—The United States may be divided into two parts, equal in area, the East and the West. The East has a humid climate, the West mostly an arid or semiarid climate, except the North Pacific coast and the higher altitudes in the Sierra, Cascade, and Rocky Mountains. Each of these two parts has been subdivided into six agricultural regions, characterized by distinct combinations of crops or systems of farming, the result largely of the different climatic conditions. In the East these regions, with one exception, are named after the crops; but in the West, because of the dominating influence of topography and the Pacific Ocean upon the climate and the agriculture, topographic and geographic names are used. (See pp. 7 to 9.)

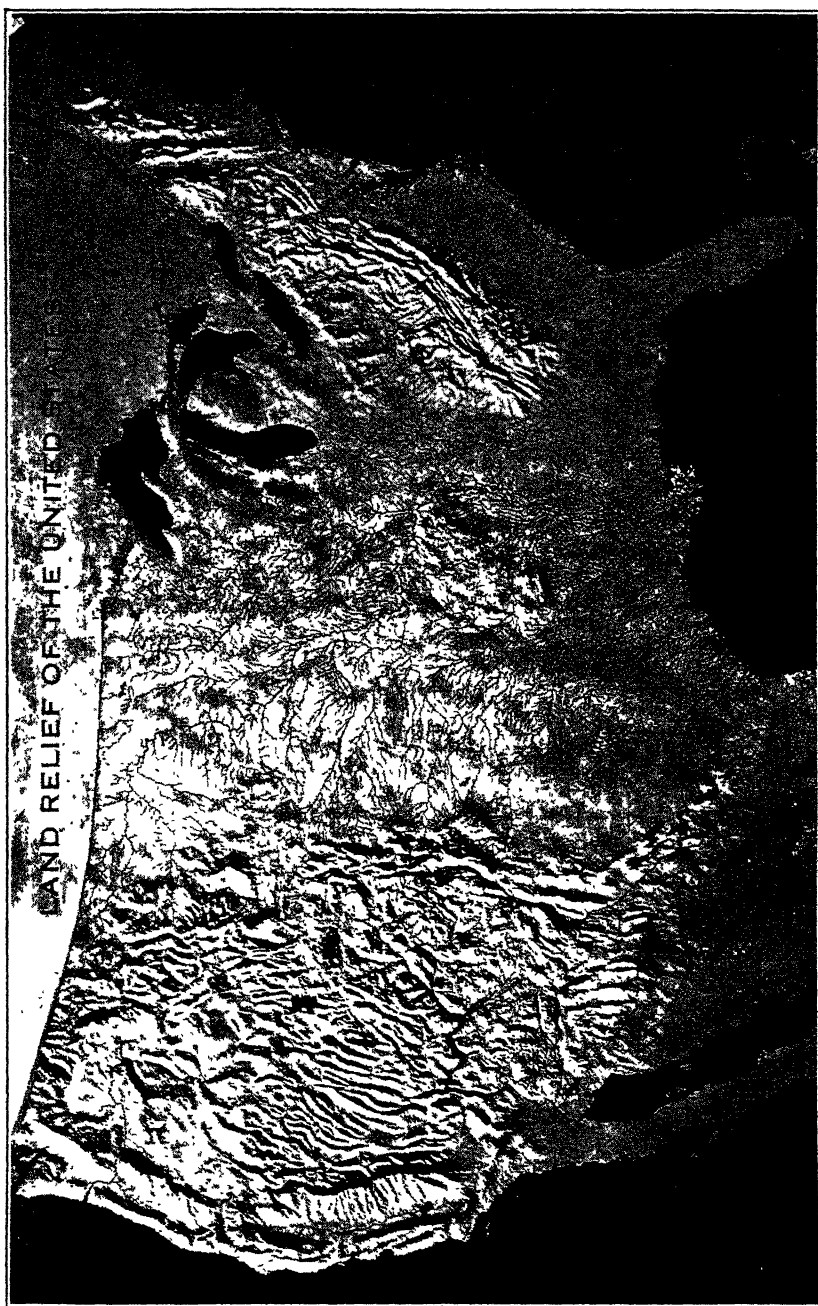


FIG. 3.—This map shows the topography of the United States in a generalized way. It is a photograph of a relief model of the United States supplied by the United States Geological Survey. The mountainous character of the West, except the Great Plains Region, is clearly shown; but the map fails to show the high altitude of much of the West, particularly of the Rocky Mountain and Arid Intermountain Plateau regions. Owing to the altitude, these regions have a much cooler climate than corresponding latitudes in the East. The vast expanse of the Mississippi Valley, with its level to rolling surface, except for the Ozark uplift in the lower central portion, should be especially noted.

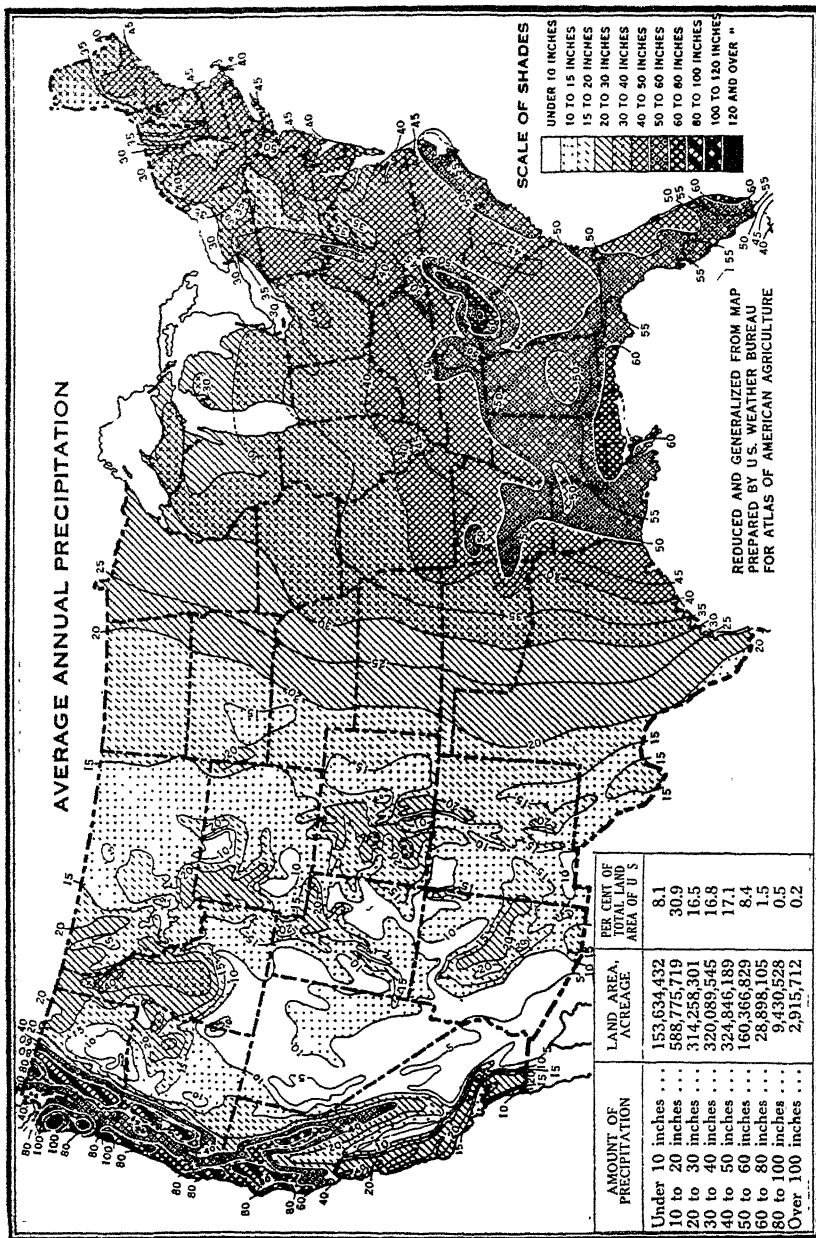


Fig. 4.—Precipitation includes rain, melted snow, sleet, and hail. The map is much reduced and generalized from a map prepared by the Weather Bureau and published in the Precipitation and Humidity section of the Atlas of American Agriculture. The map suggests why the United States should be divided agriculturally into an eastern and a western half. However, the division shown in Figure 2 does not follow a line of equal precipitation, but advances diagonally across two of the precipitation zones from 15 inches in the northwestern corner of North Dakota to 25 inches on the south Texas coast, where the evaporation is much greater and the rainfall more torrential and, consequently, more moisture is required for crop production.

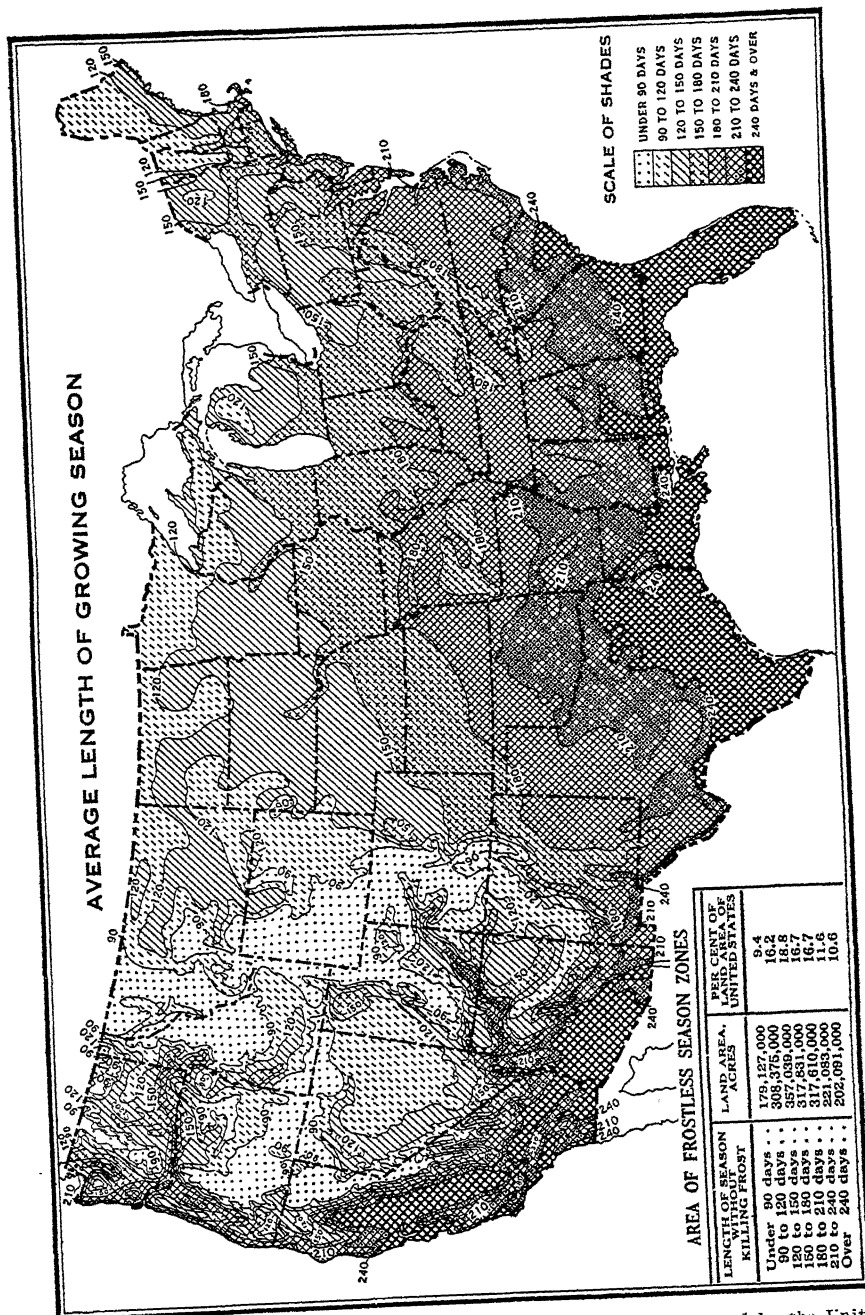


FIG. 5.—This map is much reduced and generalized from a map prepared by the United States Weather Bureau and published in the Frost and the Growing season section of the Atlas of American Agriculture. The higher altitude of the Rocky Mountain and the Arid Intermountain Regions (see Fig. 3), and the drier air (see Fig. 4), which permits rapid loss of heat at night, are two important causes of the short frost-free season. Over much of these regions the frost-free season is shorter than in northern Maine or Minnesota. The powerful influence of the Pacific and the lesser influence of the Atlantic in lengthening the growing season along their shores should also be noted.

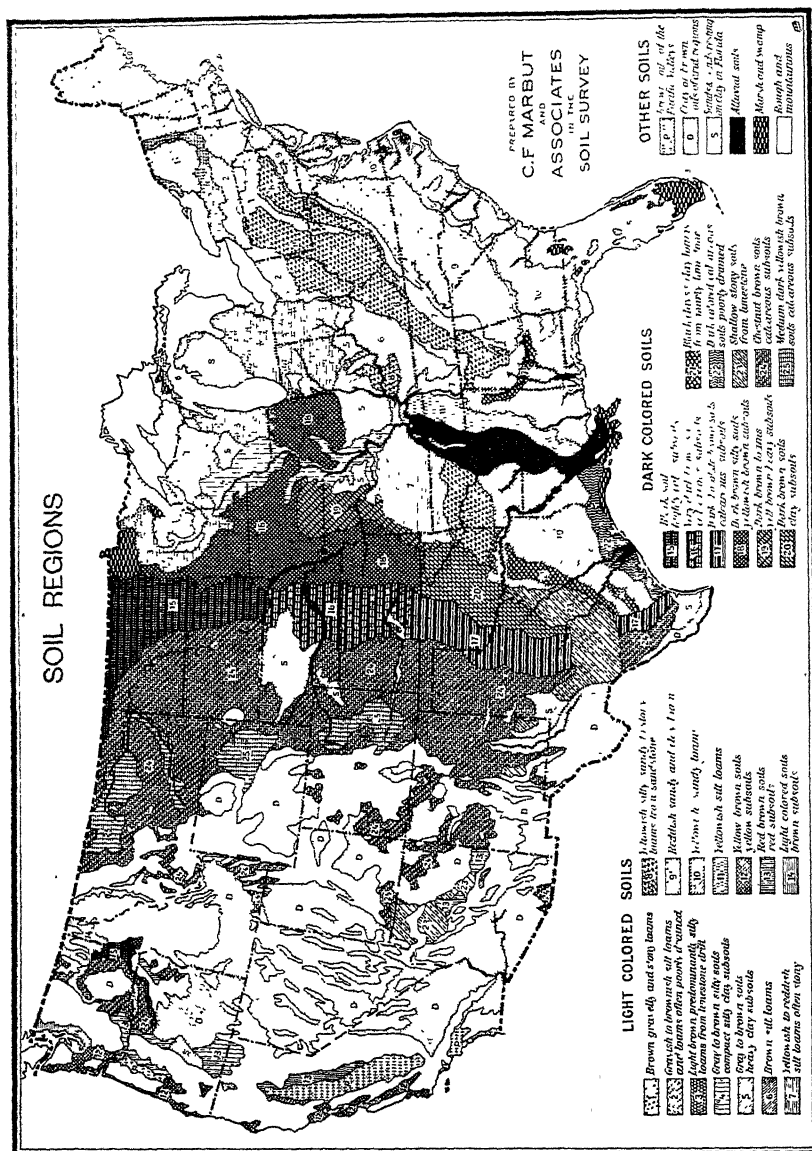


FIG. 6.—Soils originally or at present covered with forest are normally light colored, and are likely to be less fertile than soils in regions of lower rainfall. Grassland soils, in general, are dark colored, the humid prairie soils being commonly almost black and highly fertile—the subhumid prairie soils, blackest of all—while the semiarid short-grass plains soils are dark brown or chocolate colored, the color gradually fading to medium brown in regions of lesser rainfall, and to light brown or even ashy gray in desert areas. The light-colored forest soils in the United States total about 800 million acres, the dark-colored grassland soils about 600 million acres, and the light-colored arid soils about 500 million acres.

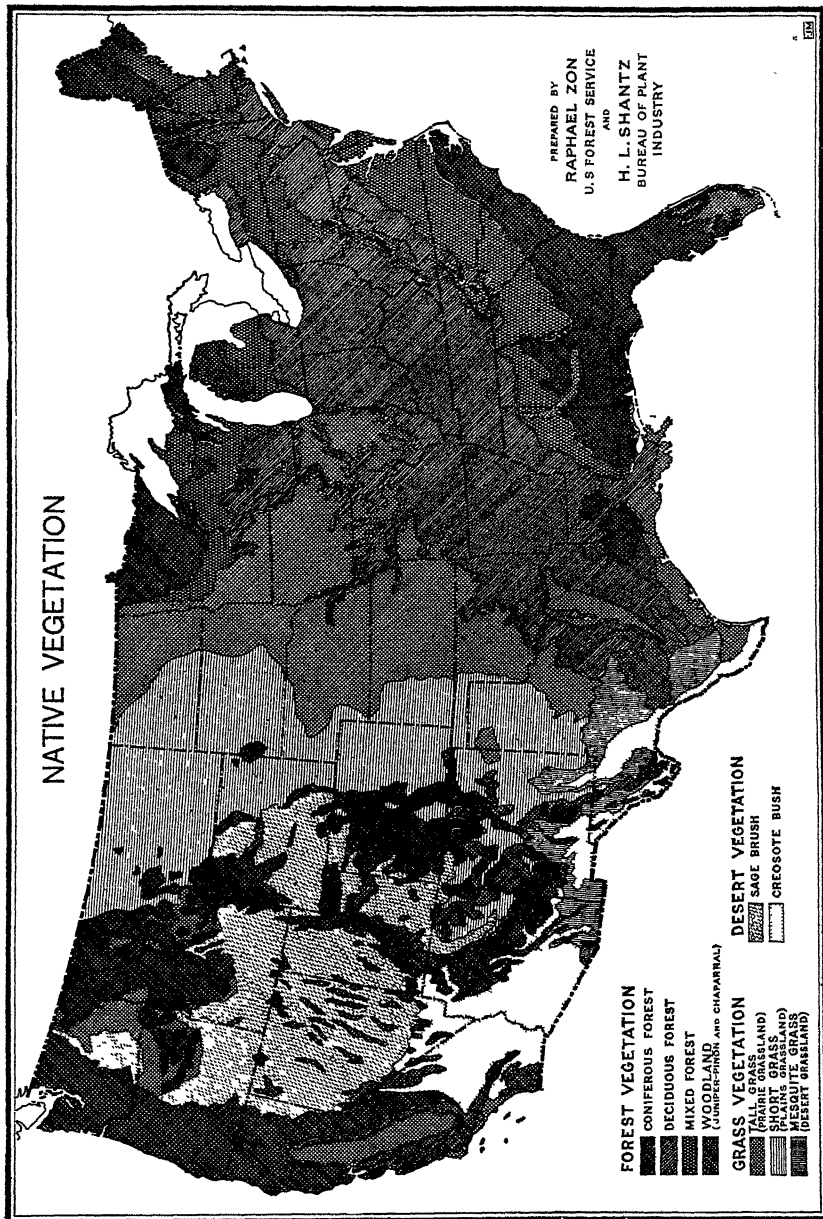


FIG. 7.—Forests, including semiarid woodland (pinon-juniper, chaparral, etc.), originally covered about 900 million acres in the United States. About 350 million acres have been cleared for agriculture, and as many more have been cut-over or devastated. (See Fig. 13.) About 600 million acres were clothed originally with grass, interspersed commonly with various herbaceous plants. Some 200 million acres of this grassland have been plowed up and used for crops, or for pasture in rotation with crops, including about 7 million acres irrigated. Desert vegetation characterized 400 million acres, of which about 12 million acres have been reclaimed by irrigation. Half of the remaining forest and woodland is pastured, practically all of the grassland, and nearly all of the desert. (See Fig. 12.)

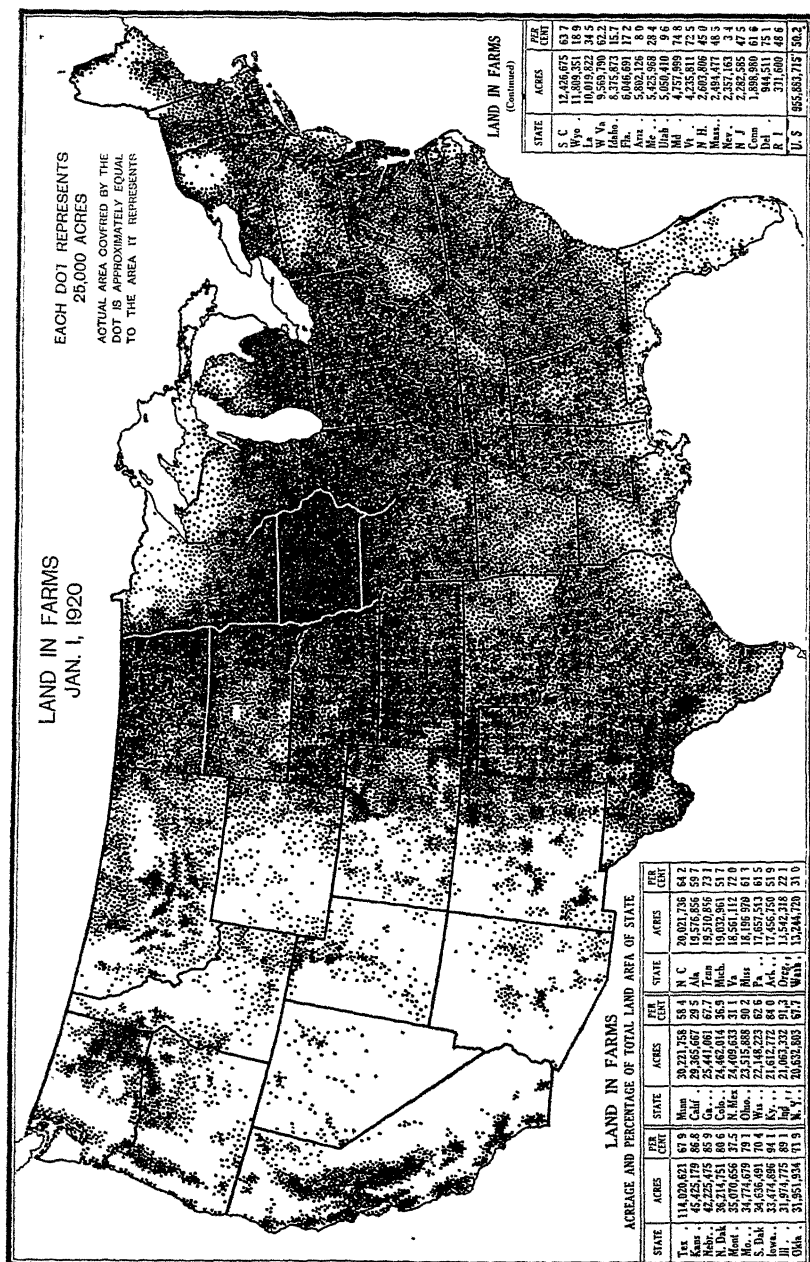


FIG. 8.—Three-quarters of the farm land is in the Mississippi Valley. Or considering the distribution with reference to rainfall, two-thirds is humid farm land in the East, and one-third is mostly arid, semiarid, or irrigated farm land in the West. In the East the land not in farms is hilly, stony, sandy, swampy, or infertile, and nearly all in forest or recently cut over. (See Fig. 13.) But in the West only one-sixth of the land not in farms is in forest, and one-ninth in woodland and chaparral, while one-sixteenth is absolute desert, the remaining two-thirds being open range, more or less covered with grasses and shrubby plants and used for grazing cattle or sheep. (See Figs. 81 and 92.)

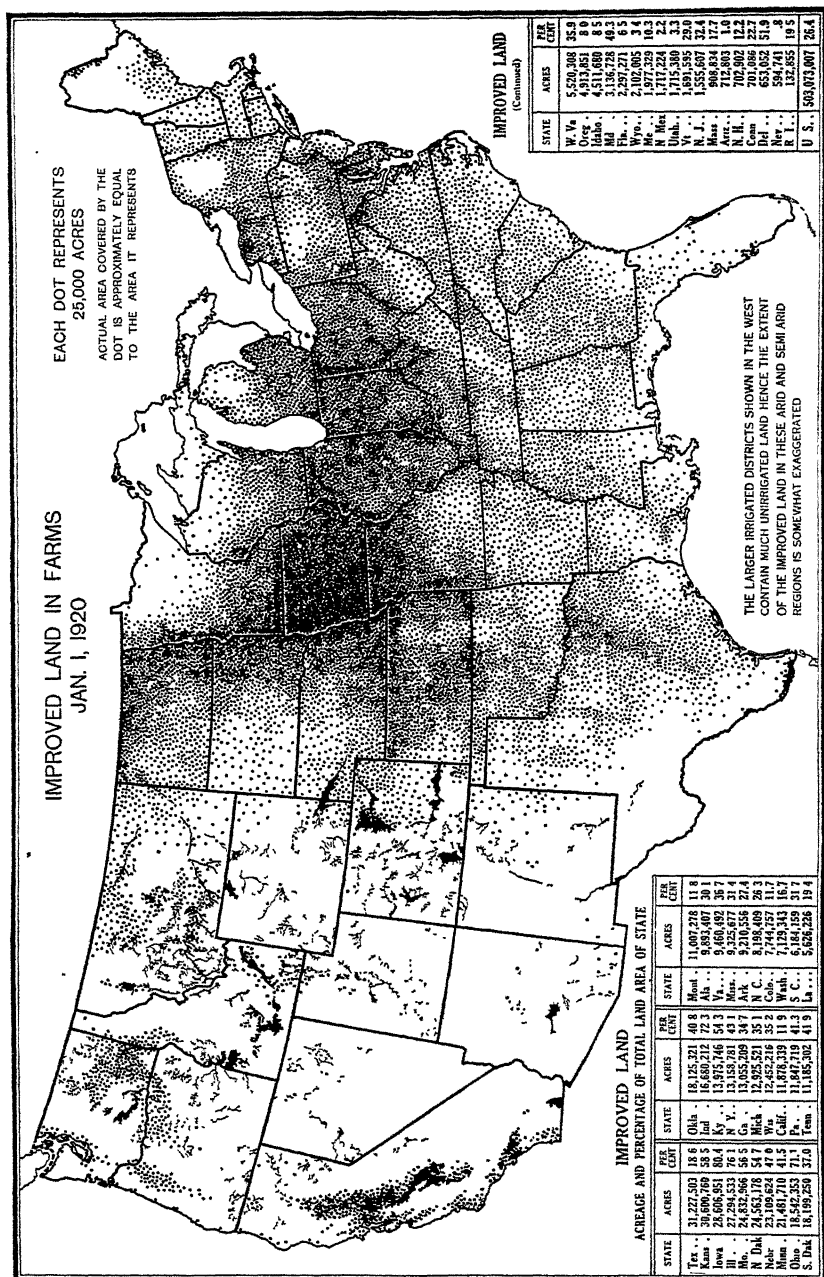


FIG. 9.—Improved land includes “all land regularly tilled or mowed; land in pasture that has been cleared or tilled; land lying fallow; land in gardens, orchards, vineyards, and nurseries; and land occupied by buildings, yards, and barnyards.” Four-fifths of the improved land is in the humid eastern half of the United States, and three-fifths is concentrated in a triangular-shaped area, the points of which are located in western Pennsylvania, central Texas, and north-central North Dakota. In this area 60 per cent of the land area is improved farm land, whereas in the United States outside this area only 15 per cent is improved.

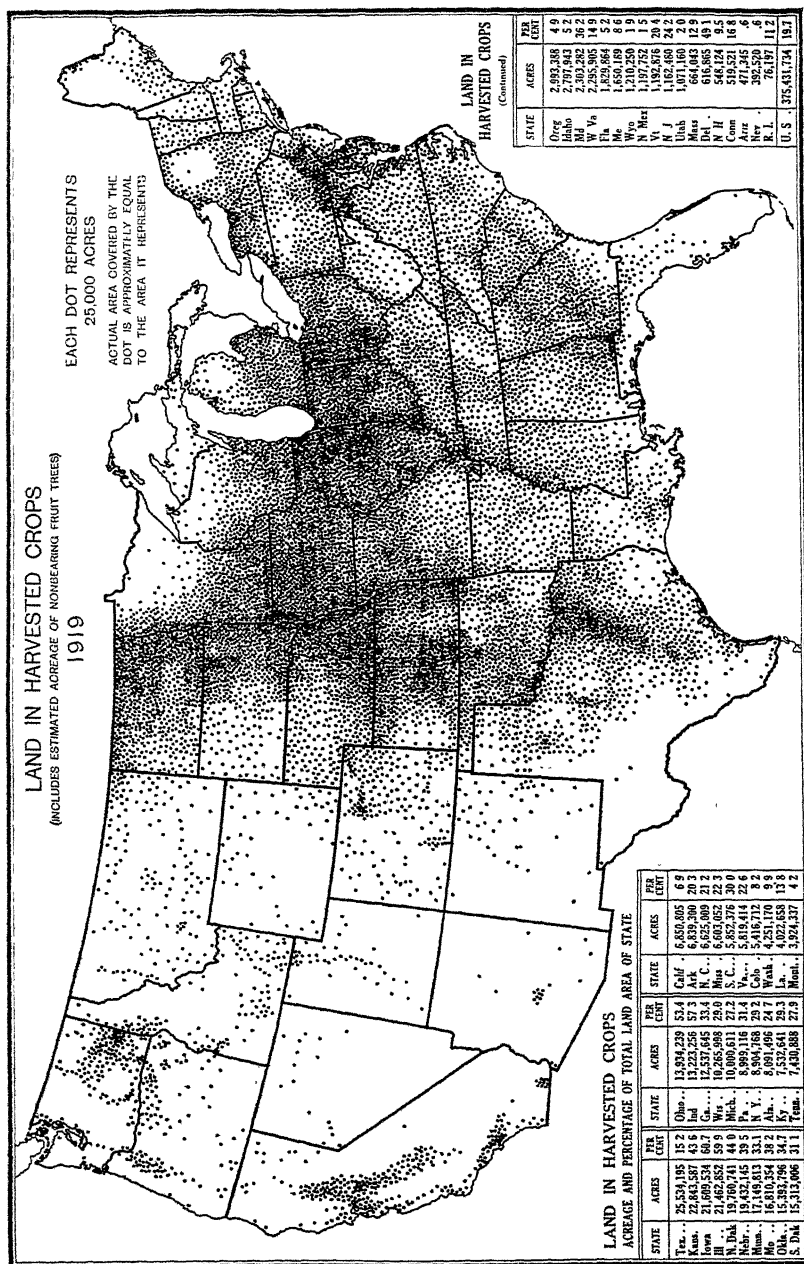


FIG. 10.—Over five-sixths of the crop land is in the humid eastern half of the United States, and nearly two-thirds is concentrated in the triangular shaped area described under Figure 9. In this area, which includes only about one-fourth of the land of the United States, are produced four-fifths of the corn, three-fourths of the wheat and oats, and three-fifths of the hay crop of the nation. No region in the world of equal size affords so favorable natural conditions for the growth of corn, and few regions possess so favorable conditions for the culture of the small grain and hay crops. (See Figs. 24, 29, 30, 32, 33, 34, and 38.)

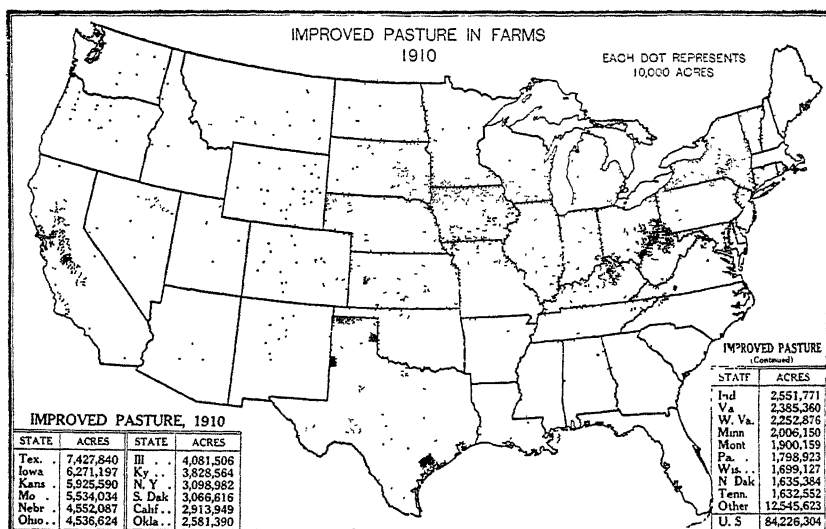


FIG. 11.—This map shows the location of the acreage of improved pasture, according to the returns of the 1910 census, which were tabulated in 1917 by the Department of Agriculture and published in Bulletin No. 626. The returns of the 1920 census have not yet been compiled. It appears probable that war-time prices encouraged the plowing and planting to crops of about 15 million acres of improved pasture between 1910 and 1920. The concentration of pasture acreage shown in certain Texas counties is owing largely to the census accrediting to the county in which the ranch headquarters is located the acreage that may extend into adjacent counties. The large acreage of improved pasture in the Ohio River valley and in the Corn Belt west of the Mississippi is noteworthy.

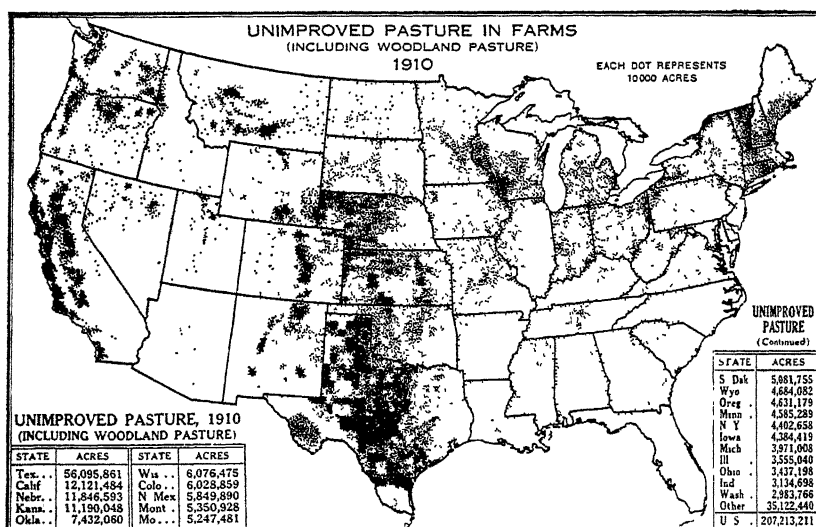


FIG. 12.—This map shows the location of forest and woodland in farms that was pastured in 1909, amounting to 98 million acres, and that of "other unimproved land" used for pasture, which amounted to about 109 million acres. In the States from Minnesota to Texas and eastward, especially in the South, forest and woodland pasture is much the larger item; but in the Great Plains Region and westward "other unimproved" pasture, which consists almost wholly of native grasses and herbs, is the more important. In addition to the unimproved pasture in farms in the West there is a vast acreage of similar land not in farms, the aggregate of unimproved pasture and range in the West being about 800 million acres.

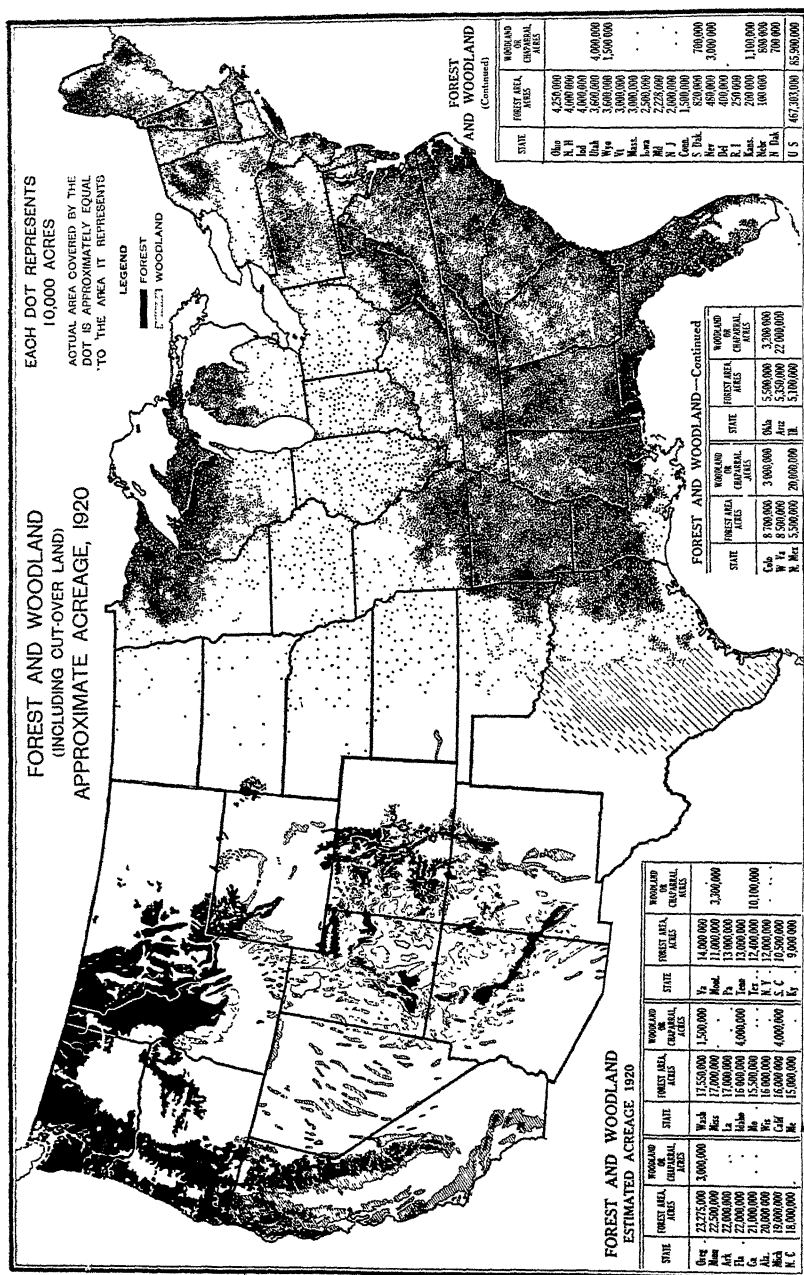


FIG. 13.—This generalized map of forest, cut-over land, and woodland was prepared in cooperation with the Forest Service. The figures given in the table are merely tentative. The estimates for the States in the originally forested eastern portion of the United States, except for several States in which forest surveys have been made, are based largely on deductions from the statistics of the 1920 census. Of the 467 million acres of forest and cut-over land in the United States about one-half is in the South, one-eighth in the Northeastern States, one-eighth in the Lake States, and nearly one-quarter in the West, mostly in the Rocky Mountain and North Pacific Regions. However, over half of the 137 million acres of virgin saw timber is in the West.

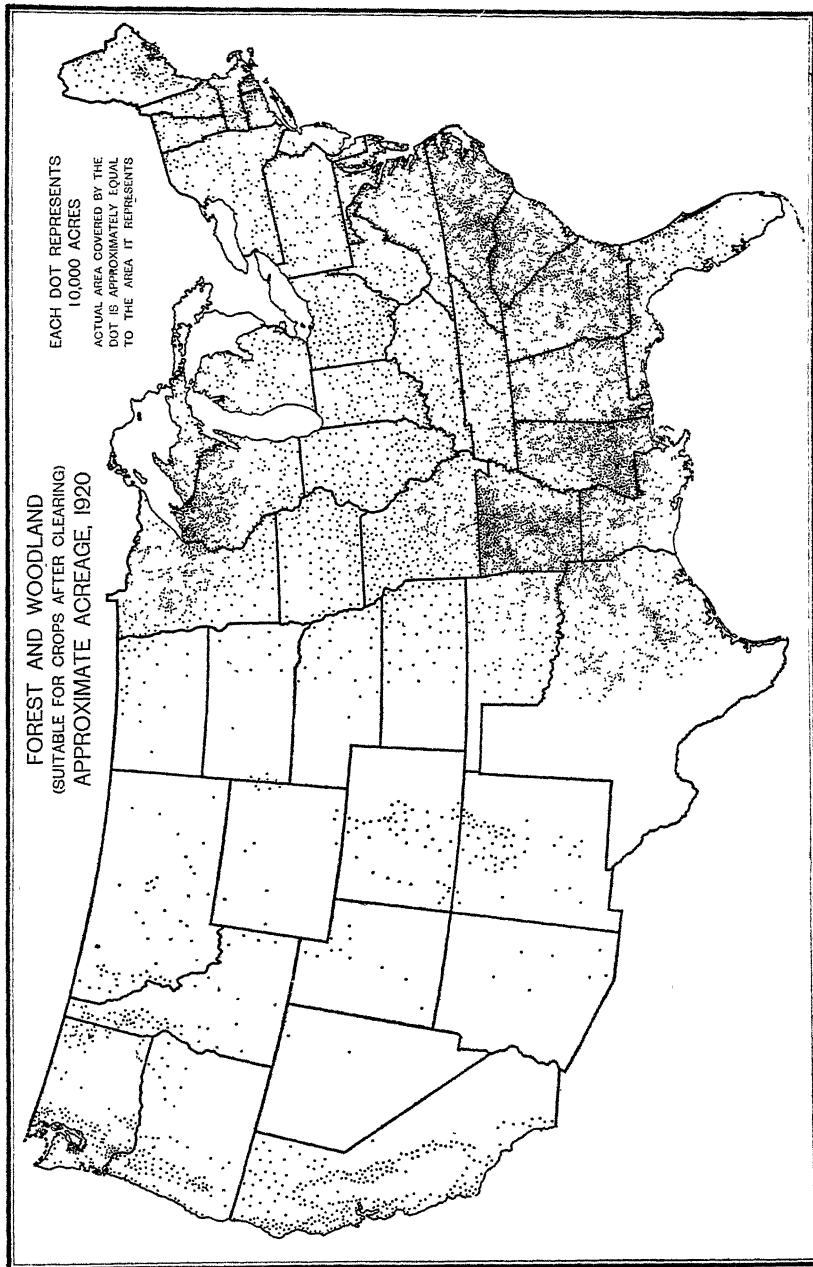
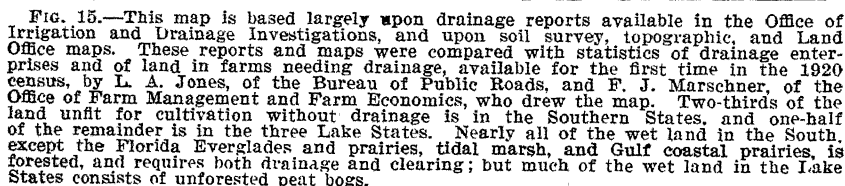


FIG. 14.—This map shows the approximate location and extent of forest, cut-over land, and woodland which could be used for the production of crops after clearing, and in many areas after drainage also. Only such part of this land should be cleared, however, as will pay adequate return on the cost of clearing. The estimates were compiled in 1918 from census data, Forest Service reports, and from correspondence with State and county officials and lumber companies, and not in 1920, as stated. Revised estimates are being compiled, based largely on 1920 census figures, soil survey reports, and forest surveys, hence no table is given in connection with the map.



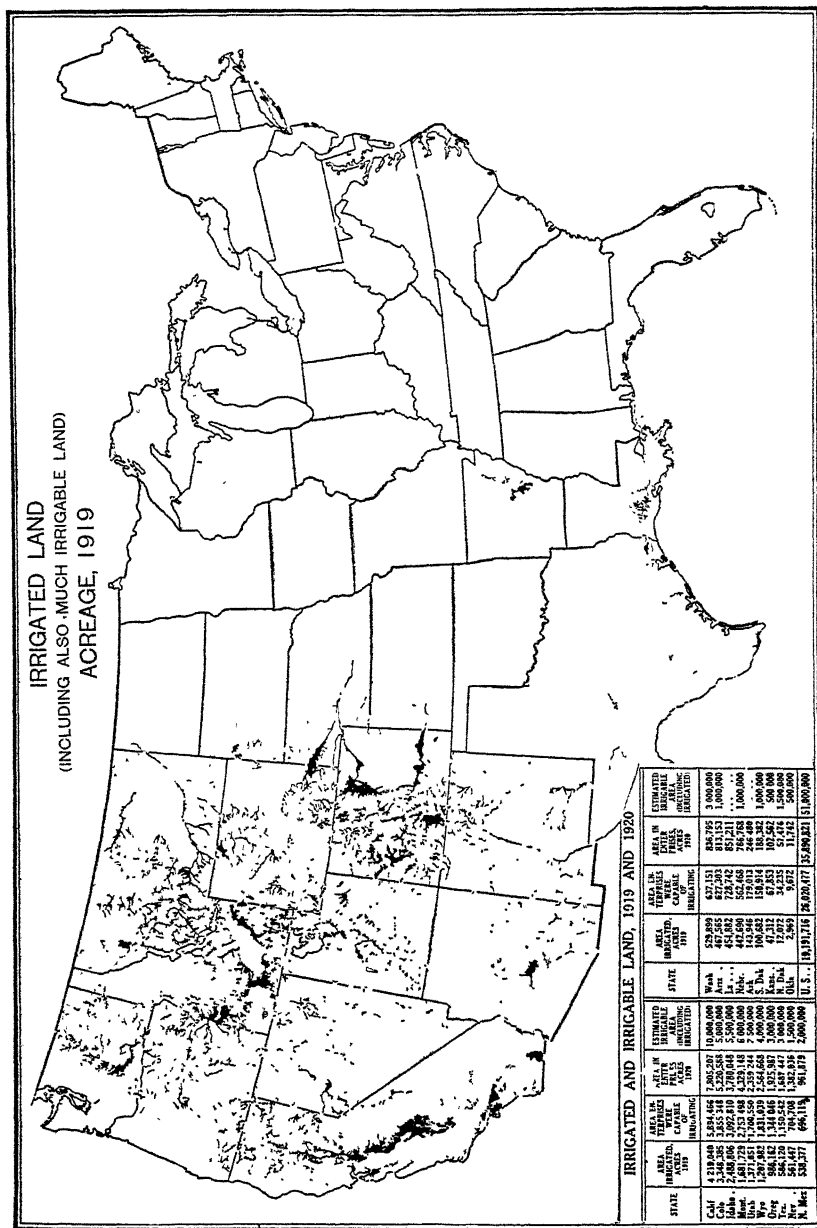


FIG. 16.—The area of irrigated land increased 5 million acres, or one-third, between 1909 and 1919; and the irrigation enterprises were capable of irrigating 7 million acres more than were actually irrigated in 1919. There is sufficient water in the West to irrigate double the area the enterprises were capable of irrigating in 1920, or about 50 million acres, when higher prices of farm products justify the constantly increasing cost per acre of construction of irrigation works. California, Colorado, and Idaho lead in irrigated acreage at present; but Montana rises into second place in the estimate of total irrigable area. Estimates of irrigable area were supplied by R. P. Teele.

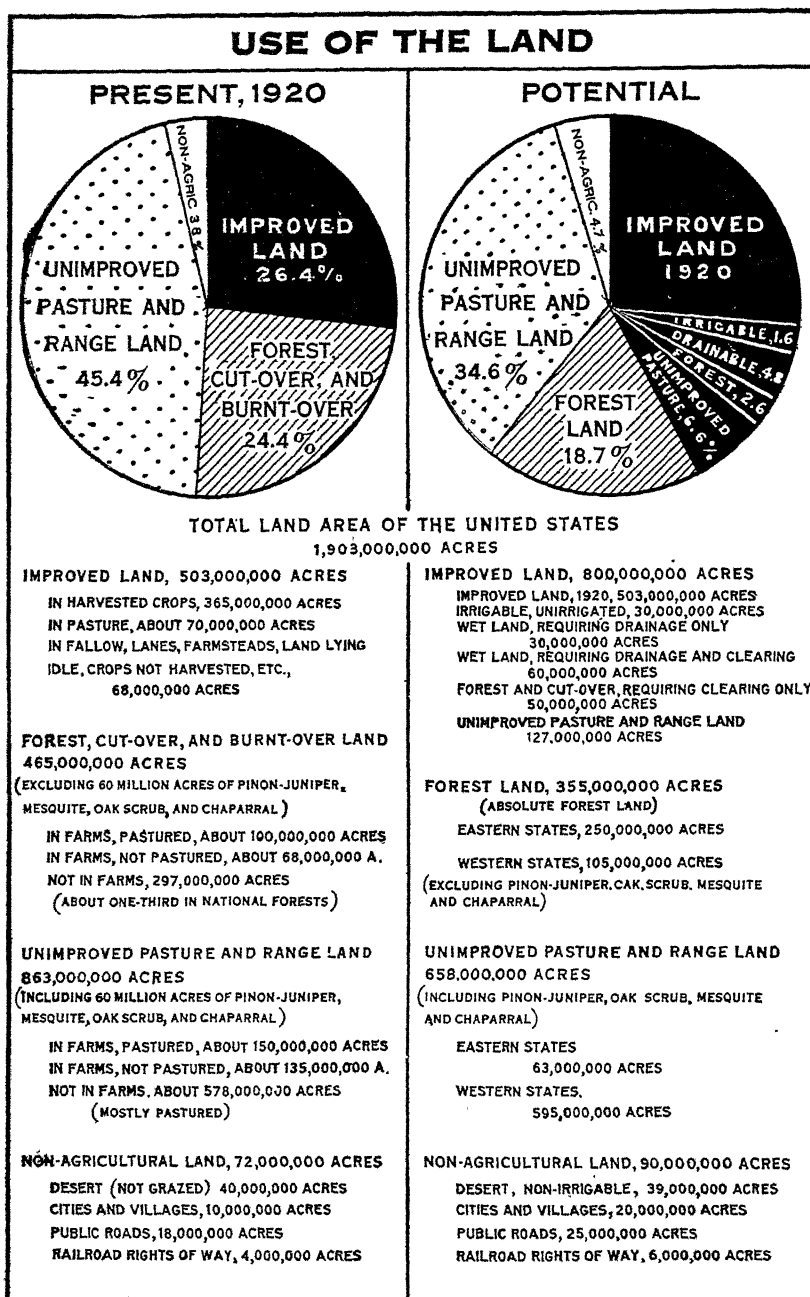


FIG. 17.—It is possible to increase the area of improved land about 300 million acres, or 60 per cent, by irrigation, drainage, clearing, and dry farming: But until farm products are higher in price most of this reclamation work would not prove profitable. On the other hand, although there are about 355 million acres of humid land so hilly or sterile as to be fit only for forests, the price of lumber will probably warrant the additional use permanently of 100 million acres of poor potentially arable land for forest instead of crops. In other words, the present forest and cut-over area is not likely to decrease greatly. The area in cities and villages is relatively insignificant and will remain so even with double or treble the present population.

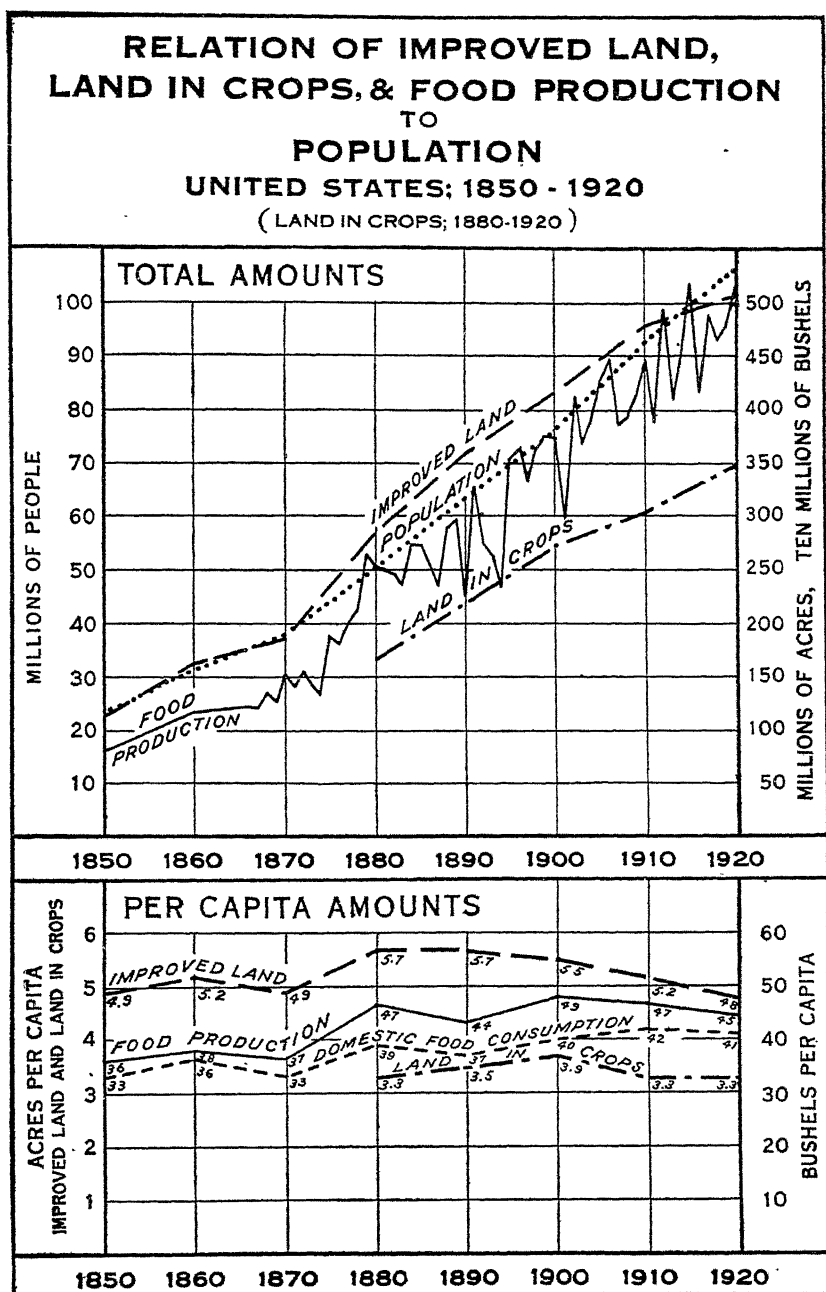


FIG. 18.—The amount of improved land kept pace with the increasing population from 1850 to 1870, increased more rapidly than population till about 1885, then more slowly till 1910, and during the decade 1910-1920 increased only 5 per cent, as compared with 15 per cent increase in population. Food production, however, increased more rapidly than population till about 1906, or for 20 years after the peak had been reached of acreage of improved land per capita, and has since increased more slowly than population. But consumption per capita has been maintained up to the present time by diminishing the exports. The per capita production and consumption figures are five-year averages centered on the census year.

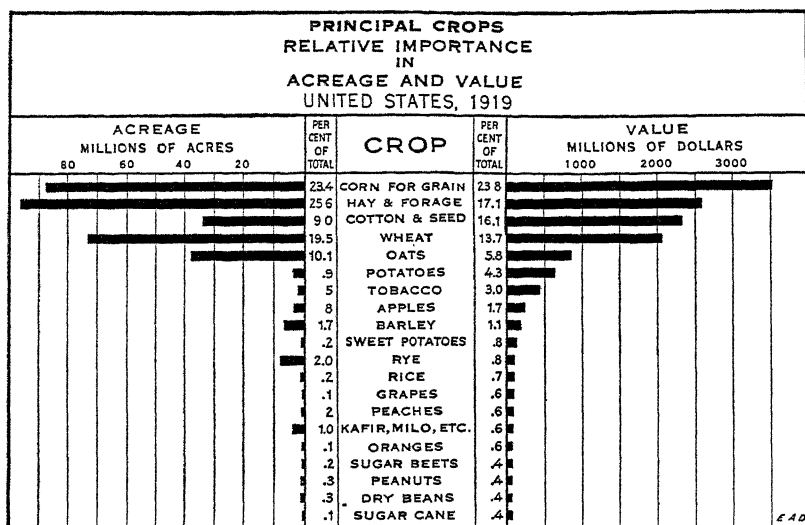


FIG. 19.—Five crops—corn, hay and forage, cotton, wheat, and oats—constitute nearly 90 per cent of the acreage and over 75 per cent of the value of all crops. Corn for grain is the leading crop on the basis of value, and if the acreage of corn cut for forage and for silage be added to that of corn for grain, instead of being included with hay and forage, corn is the leading crop also in acreage. Cotton ranked third in value, but fifth in acreage in 1919, the value of the cotton crop per acre being about twice that of corn or wheat. Wheat stood fourth in value but third in acreage, while oats were fifth in value and fourth in acreage. Potatoes, then tobacco and apples ranked next to these five crops in value, but barley, rye, and the grain sorghums ranked next in acreage.

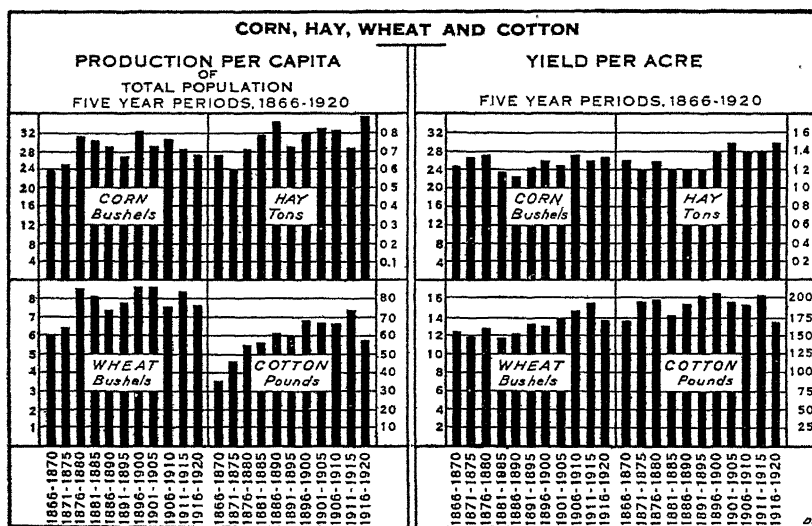


FIG. 20.—These four crops—corn, hay, wheat, and cotton—constitute three-fourths of the total crop acreage of the United States. Production per capita, it will be noted, rose for 15 to 20 years after the Civil War, then remained more or less steady for 25 to 30 years, and has recently declined, except in the case of hay. The yield per acre of corn has remained remarkably constant for 55 years, of hay and wheat has increased about one-sixth, but the yield per acre of cotton has declined notably since 1914. In general, production had kept pace with population until recently, not primarily because of increasing yields per acre, but mostly because of expanding crop acreage.

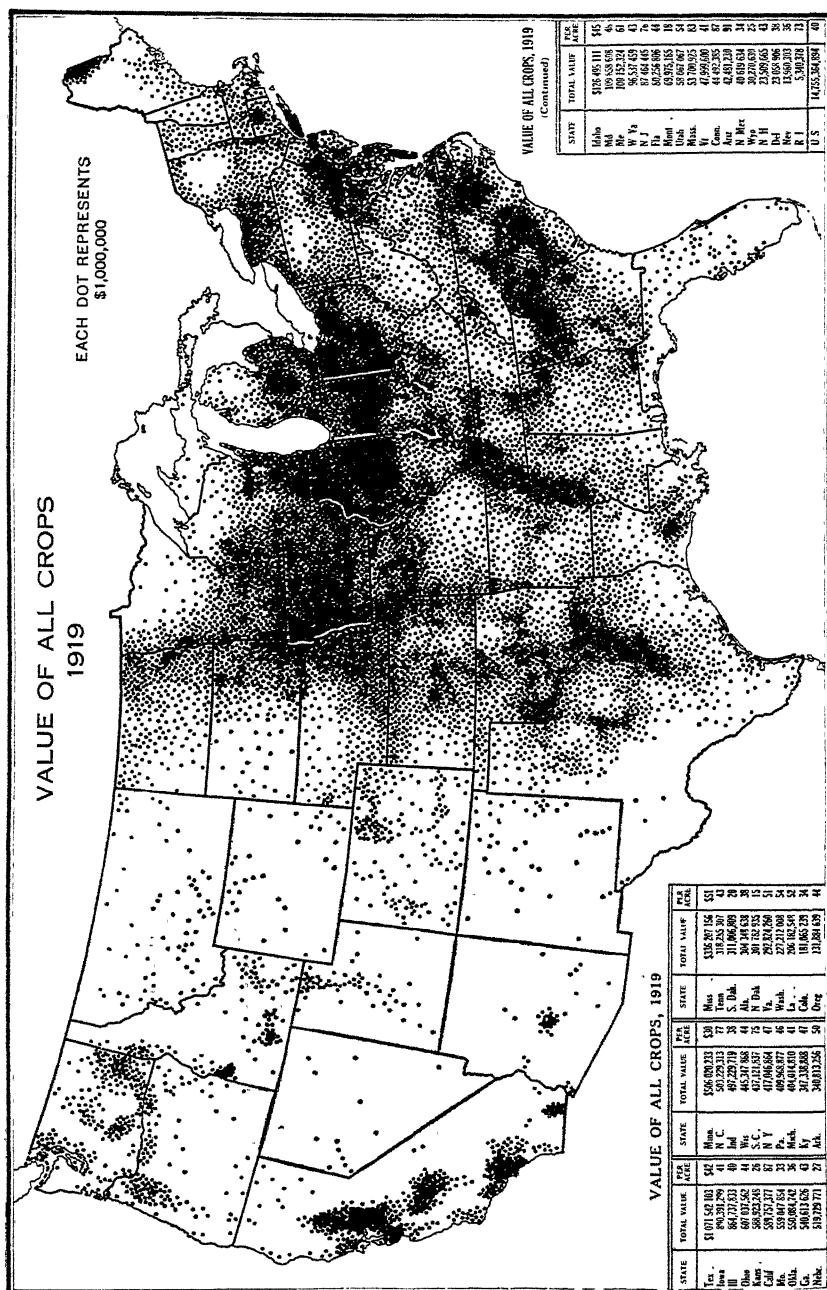
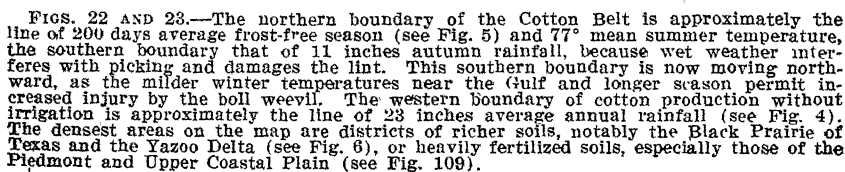


FIG. 21.—The eastern half of the United States produced in 1919 about 86 per cent of the value of all crops of the Nation; the value of the crops produced in the Cotton Belt and the Corn Belt being nearly 50 per cent. The value of the crops per square mile of land area was about \$15,000 in the Corn Belt, and \$8,700 in the Cotton Belt, descending to only \$673 in the Arizona-California Desert Region; but the value per acre in crops was highest in the Arizona-California Desert Region (\$95), where all crops are irrigated, and lowest in the Great Plains Region (\$21), where most of the crops are grown under semiarid conditions.



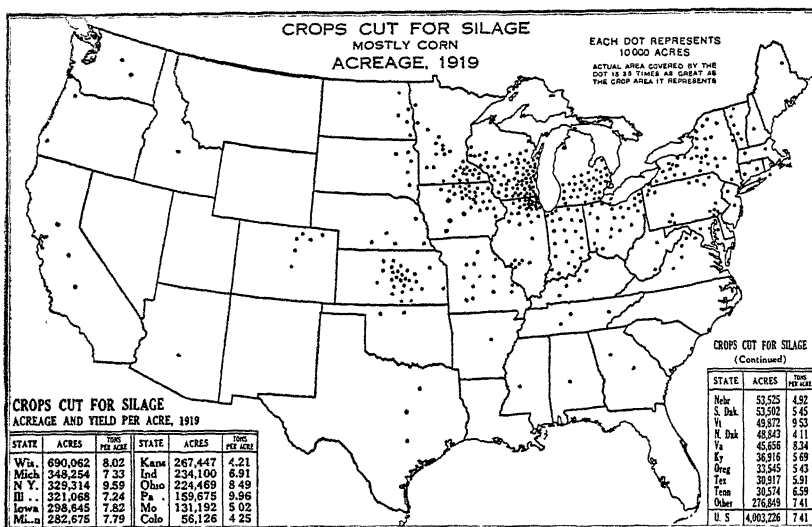


FIG. 25.—Corn constitutes probably 95 per cent or more of the acreage of crops cut for silage. In the Southwest relatively small amounts of kafir and milo are used for silage; and in the Northwest occasionally sunflowers are so used, likewise pea vines in Wisconsin; but the amounts, except of kafir and milo, are insignificant. Silage is fed principally to dairy cows in the winter, but its use for beef cattle is increasing rapidly, especially in the Corn Belt, and a small amount is fed to sheep. Consequently at present the area of silage crops corresponds in a general way with that of dairy cows, except in central Kansas, where silage is fed mostly to beef cattle. (See Figs. 81 and 82.)

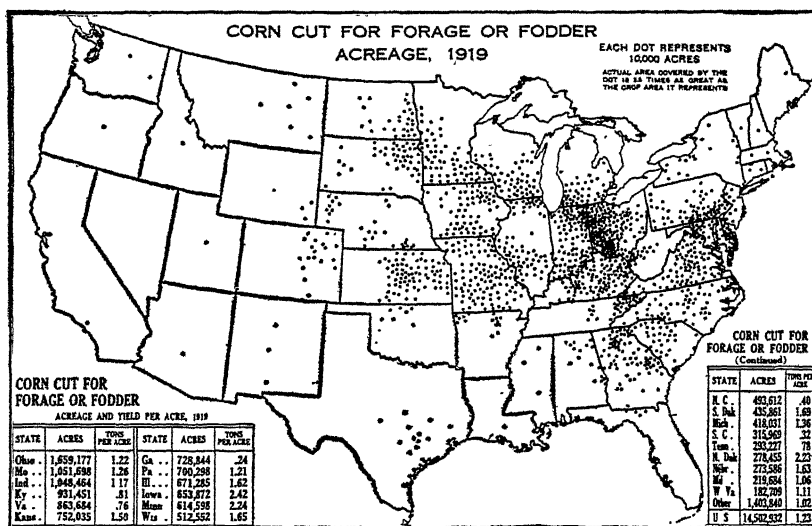


FIG. 26.—Corn is cut for forage mostly around the margin of the Corn Belt and in the Middle and South Atlantic States. This practice corresponds, in a general way, with the areas in which corn is cut and shocked. Doubtless much, perhaps most, of this corn reported to the census as cut for forage was also harvested for grain. Much of the acreage of corn shown on this map, therefore, is also shown on the map of corn for grain (Fig. 24). The Department of Agriculture estimates the area of corn cut for forage only in 1921 at 2,600,000 acres. Corn forage is fed almost wholly to cattle, though a little is used to feed sheep and horses.

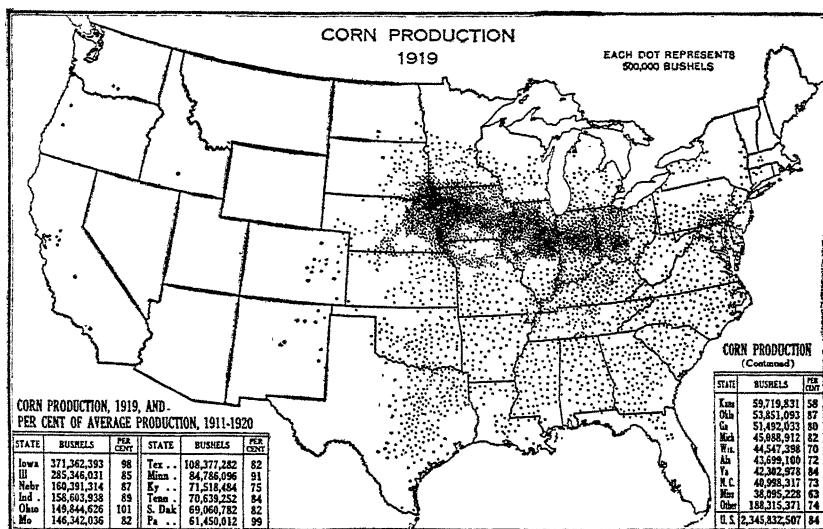


FIG. 27.—Corn is the great American cereal, constituting about 60 per cent of the tonnage of all cereals grown in the United States, and over 50 per cent of the value. More than half of this crop is produced in the Corn Belt; but corn is the leading crop in value also in the Corn and Winter Wheat Belt, and is the all-important cereal in the Cotton Belt. Corn is a very productive crop, yielding in general, about twice as many pounds of grain per acre as wheat, oats, barley, or rye. The climate and soil of the Corn Belt are peculiarly suited to it. Probably no other area in the world of equal extent produces so much food per square mile as the Corn Belt. (See Figs. 21 and 104.)

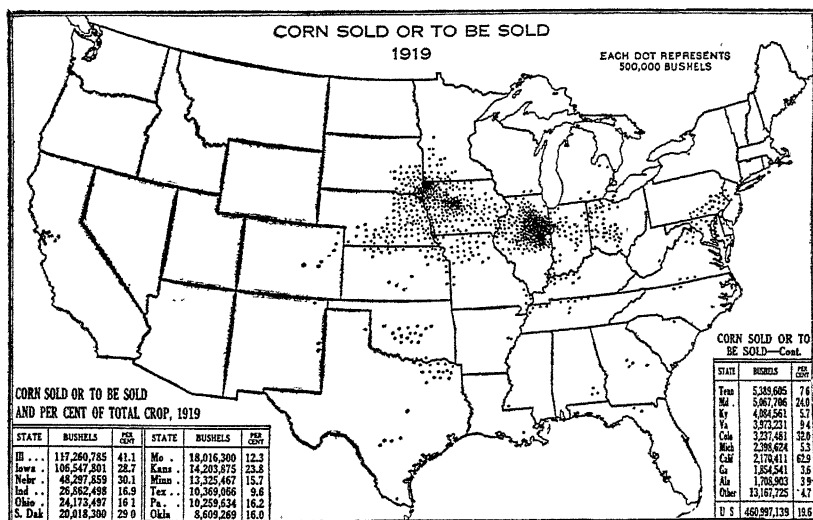


FIG. 28.—In the Corn Belt most of the corn is fed to hogs, cattle, and horses on the same farm that it is grown (see figs. 89, 81, and 76); but a considerable quantity, amounting to 41 per cent of the crop in Illinois in 1919, and about 30 per cent in Iowa, South Dakota, and Nebraska, is sold to nearby farmers, is shipped to consumers in the South and East, is exported largely through Chicago and the Atlantic coast, or is made into starch and glucose. The corn which the map indicates as sold from the farms in Pennsylvania, Maryland, and several Southern States, consists mostly of sales to neighboring farmers. Farms near the water front in Maryland and Virginia, however, ship corn by water to Baltimore, whence it is exported.

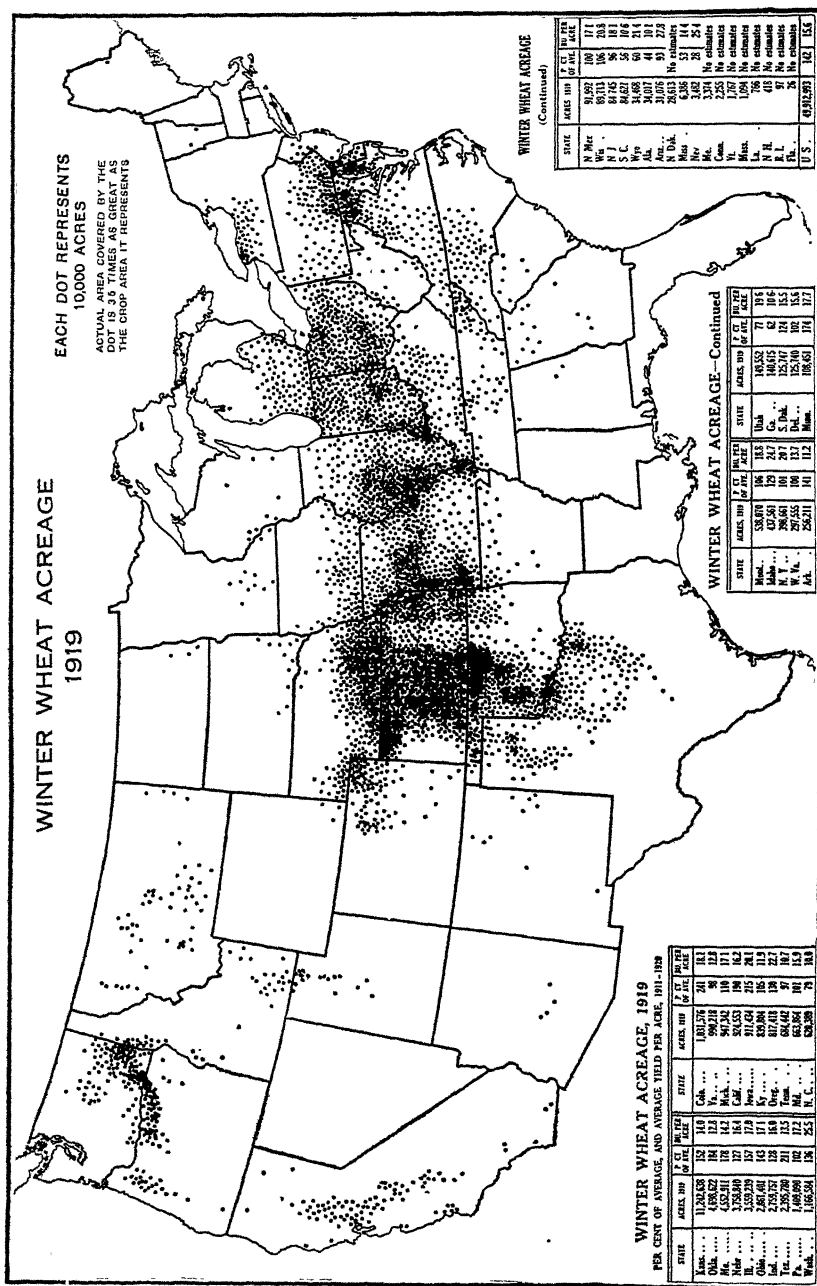


FIG. 29.—The Corn and Winter Wheat Belt included 42 per cent of the Nation's acreage of winter wheat in 1919, and 30 per cent more was located in the southern and eastern portion of the Corn Belt. The southern boundary of this winter wheat belt follows the isotherm of 72° during the month preceding harvest (June 15); and although some wheat is grown south of this line, it frequently suffers severe damage from rust. The northern frontier of winter wheat follows, in a general way, the mean winter temperature line of 20°, which extends in a northwesterly direction from northern Illinois and Iowa diagonally across South Dakota and Montana.

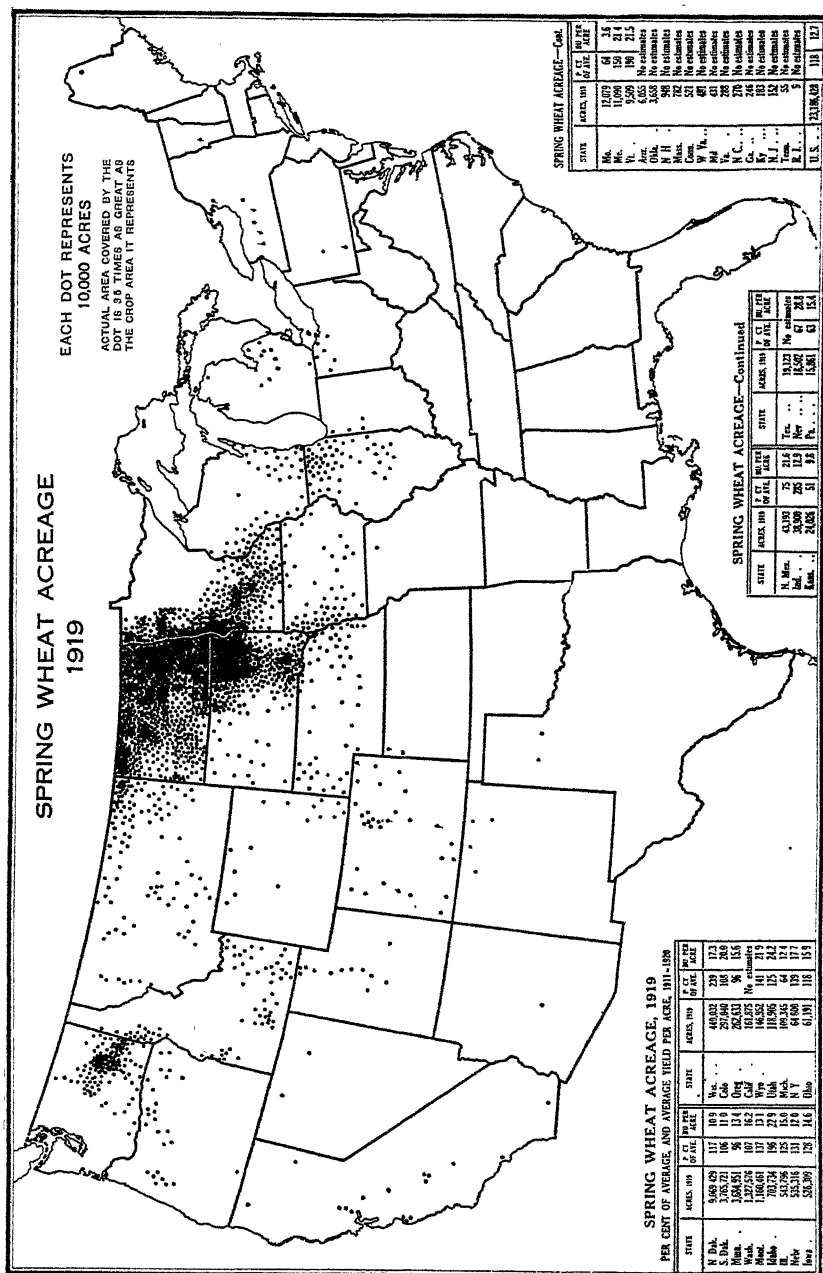


FIG. 30.—About half the acreage of spring wheat in 1919 was in the Spring Wheat Area, where it constituted 40 per cent of the acreage of all crops, and most of the other half was located in the adjoining portion of the Great Plains Region. A secondary but important center of production is located in the subhumid portions of Washington and Oregon. The southern boundary of the Spring Wheat Area is determined largely by the northern boundary of winter wheat, which is, in general, more productive and more profitable where it can be grown. The northern limit of spring wheat is approximately the mean summer temperature of 58°, which is found in the United States only in the western mountains.

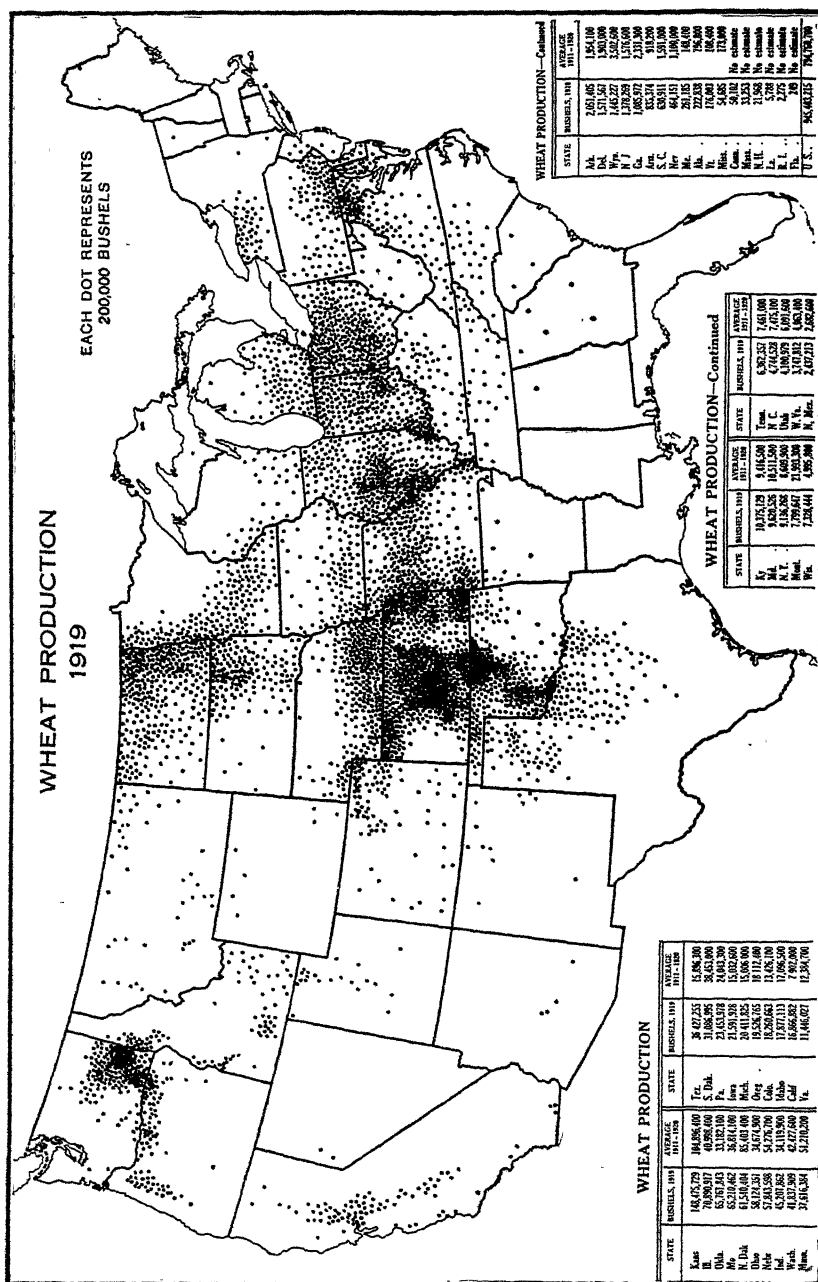


FIG. 31.—The United States produces about one-fifth of the world's wheat, as compared with three-fifths of the world's corn and cotton. The wheat crop of the United States, measured in bushels, is usually from one-fourth to one-third of the corn crop. Half of the wheat crop was grown in six States in 1919. Kansas was the leading State, as usual, but North Dakota, which has often ranked first and is usually second, had a very poor crop in 1919. On the other hand, both acreage and production were unusually large that year in the southern portion of the Corn Belt and northern portion of the Corn and Winter Wheat Region. (See Fig. 2.)

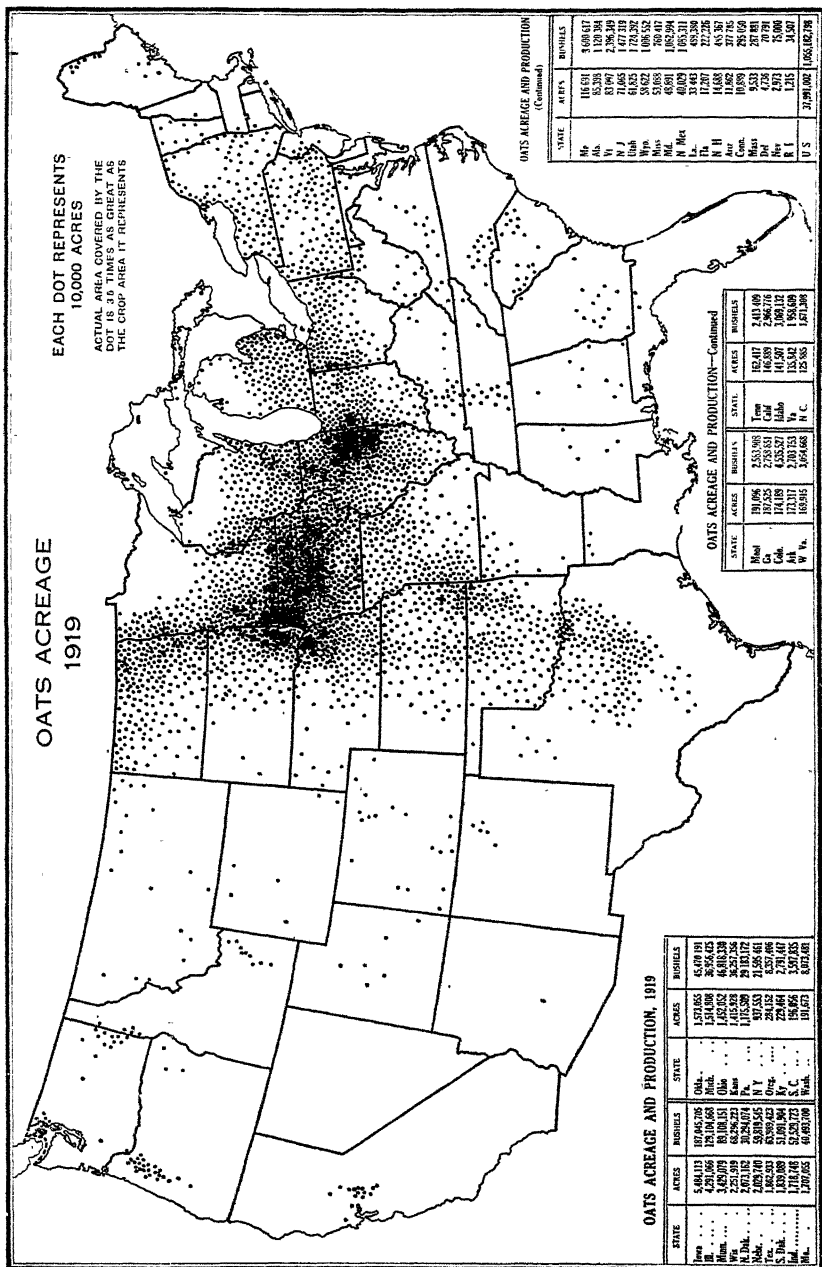


FIG. 32.—The Oat Belt of the United States consists of a crescent-shaped area extending from New England to North Dakota, bounded on the north by the Great Lakes and on the south by the Corn and Winter Wheat Regions. It extends southwesterward from this belt across eastern Kansas and Oklahoma to central Texas. Oats prefer cool, moist climate, and this large acreage in the Corn Belt and southwesterly is owing more to the need of feed for horses, and of a spring grain nurse crop for clover, than to particularly favorable climatic conditions. In the Southern States most of the oats are fall sown, but in the North the oats are sown in the spring.

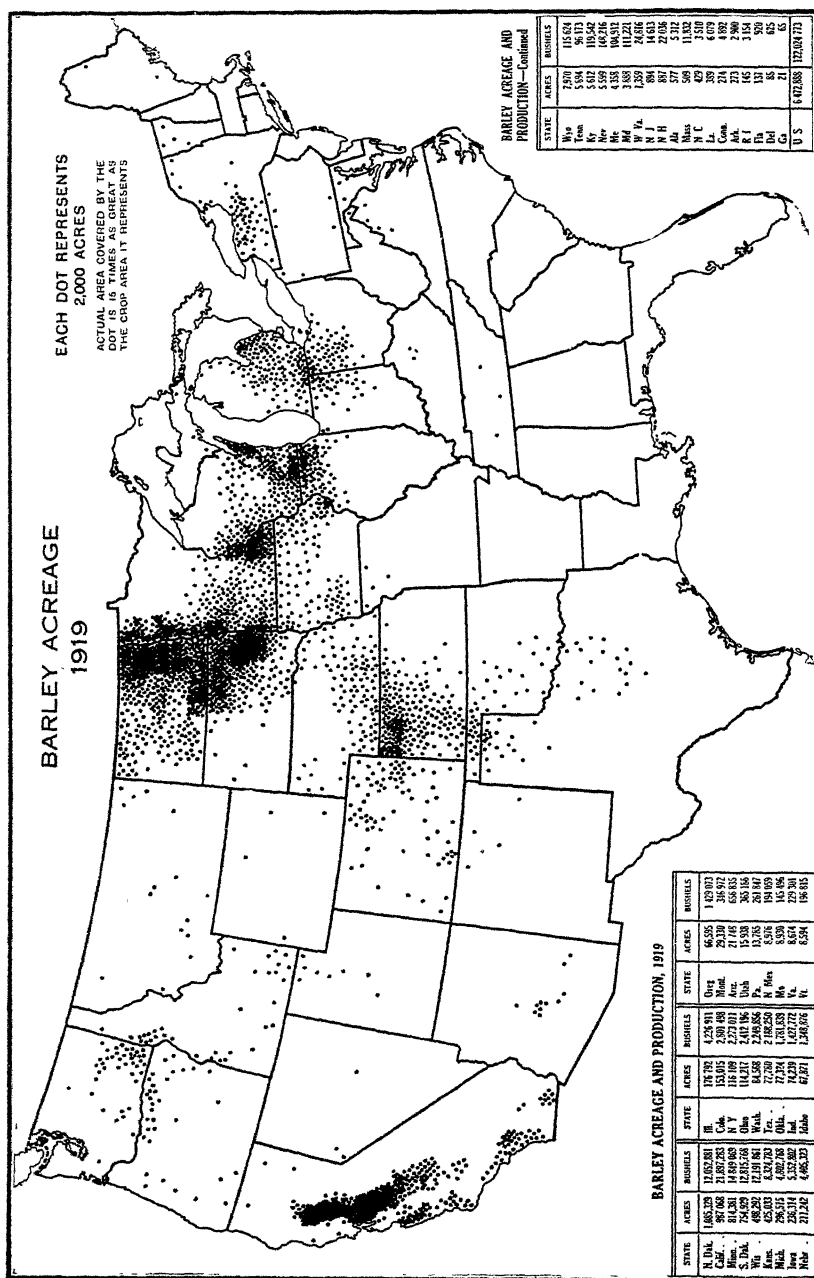


FIG. 33.—It should be noted that a dot on this map represents only one-fifth as much acreage as on the maps of corn, wheat, and oats. Barley is a minor crop in the United States compared with these crops, except in southeastern Wisconsin, southeastern and northwestern Minnesota, the eastern portions of the Dakotas, and the valleys of California. In these five States nearly two-thirds of the Nation's barley acreage is found. Minor centers may be noted on the map in northwestern Kansas, southeastern Michigan, and northwestern New York. These barley districts are characterized by a cool, sunny climate. The crop in California is grown during the winter. Much barley is also sown in California to be cut green for hay (see Fig. 45).

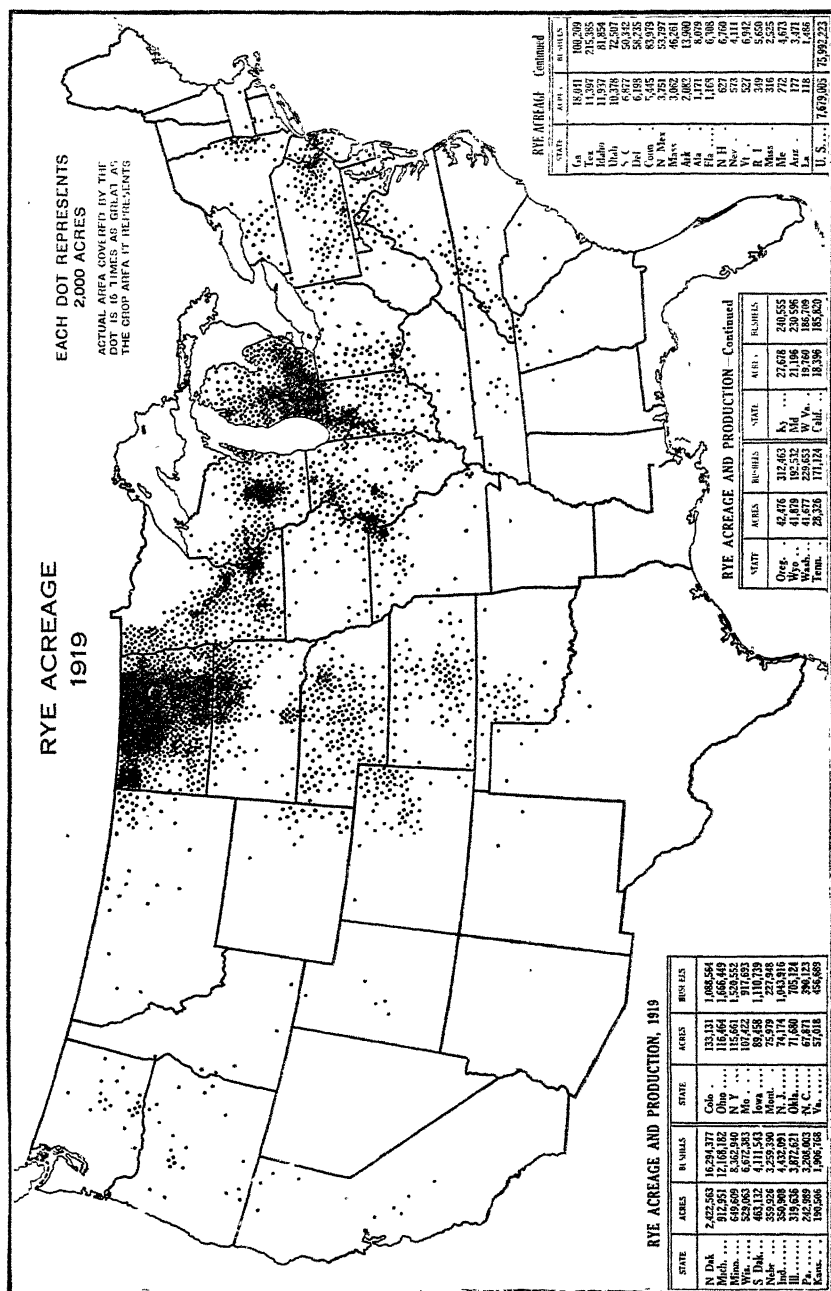


FIG. 34.—Rye acreage in North Dakota increased from 48,000 in 1909 to 2,422,000 in 1919. This acreage in North Dakota in 1919 was almost one-third of the total in the United States, although, owing to an unfavorable season, the production was little greater than in Michigan. Rye heretofore has been grown mostly in the sandy sections of the Lake States, and this sudden extension of production onto the subhumid lands of the Spring Wheat and Great Plains regions is an interesting and probably significant development. The acreage of rye in the United States in 1919 was much greater than ever before, exceeding, even, the acreage of barley, but has declined nearly half during the past two years.

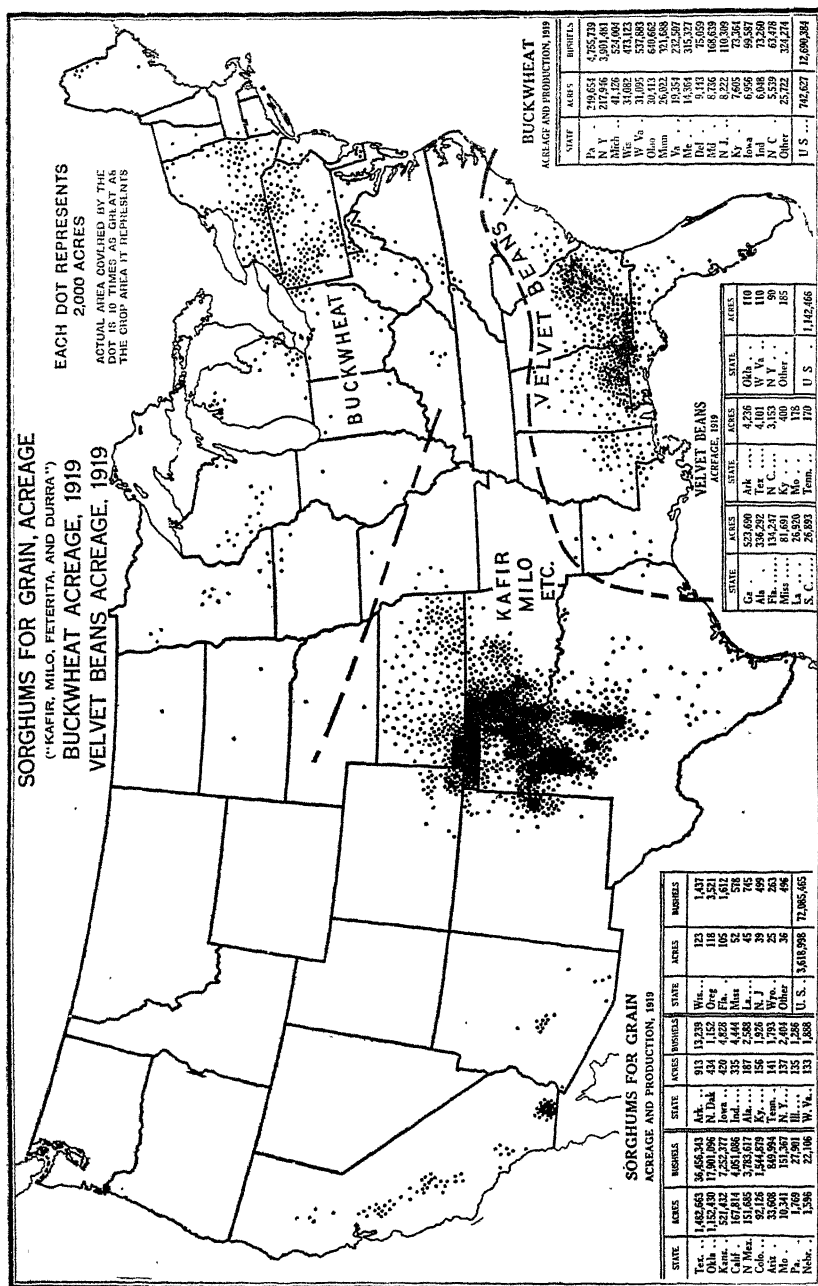


FIG. 35.—The grain sorghums are, perhaps, our most drought-resistant crops. The expansion of acreage during the past two decades in the southern Great Plains area has been extraordinary. From 1899 to 1909 the acreage in the United States increased from 266,000 to 1,635,000, or sixfold, and between 1909 and 1919 it more than doubled. Buckwheat, which is practically confined to the Appalachian area and the Lake States, has decreased slightly in acreage since 1909. It is peculiarly adapted to districts having cool, moist summers and sour soils.

The velvet bean, grown as a forage crop, has increased greatly its acreage in the Southeastern States, where the boll weevil has discouraged cotton growers and awakened interest in live-stock production. (See Figs. 22 and 81.)

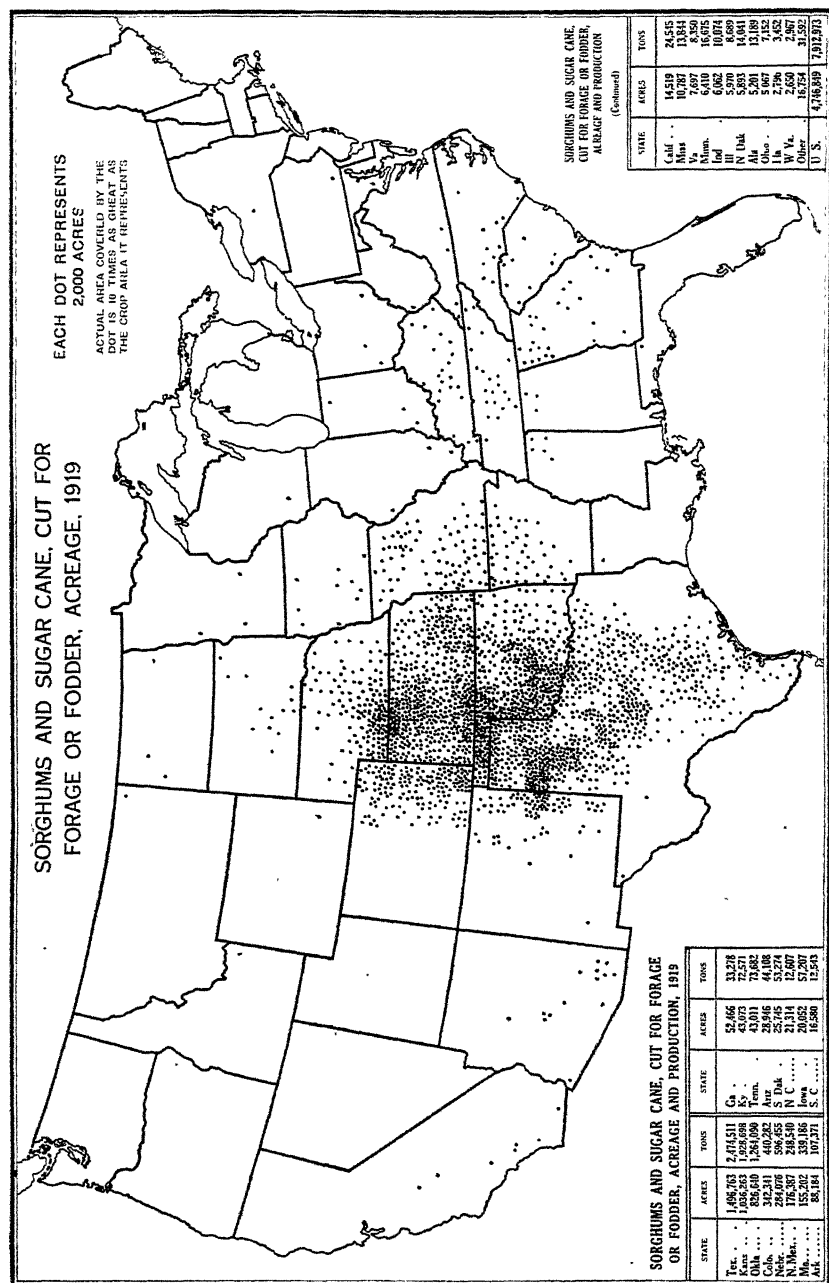


FIG. 36.—The sorghums are grown for forage much farther north than for grain; while the sweet sorghums, which are not commonly grown for grain, are frequently used for forage far to the east in the Cotton Belt and the Corn and Winter Wheat regions. The acreage of sorghums for forage is larger than the acreage for grain, especially in Kansas, where some sorghum is used for silage (see Fig. 25). It is interesting to note that the average yield per acre of sorghum forage was 1.7 tons in 1919, as compared with less than 1 ton per acre for corn in this area, and 1.2 tons for corn in the entire United States. The sorghums, apparently, yield more forage per acre in this semiarid area than corn in the humid regions.

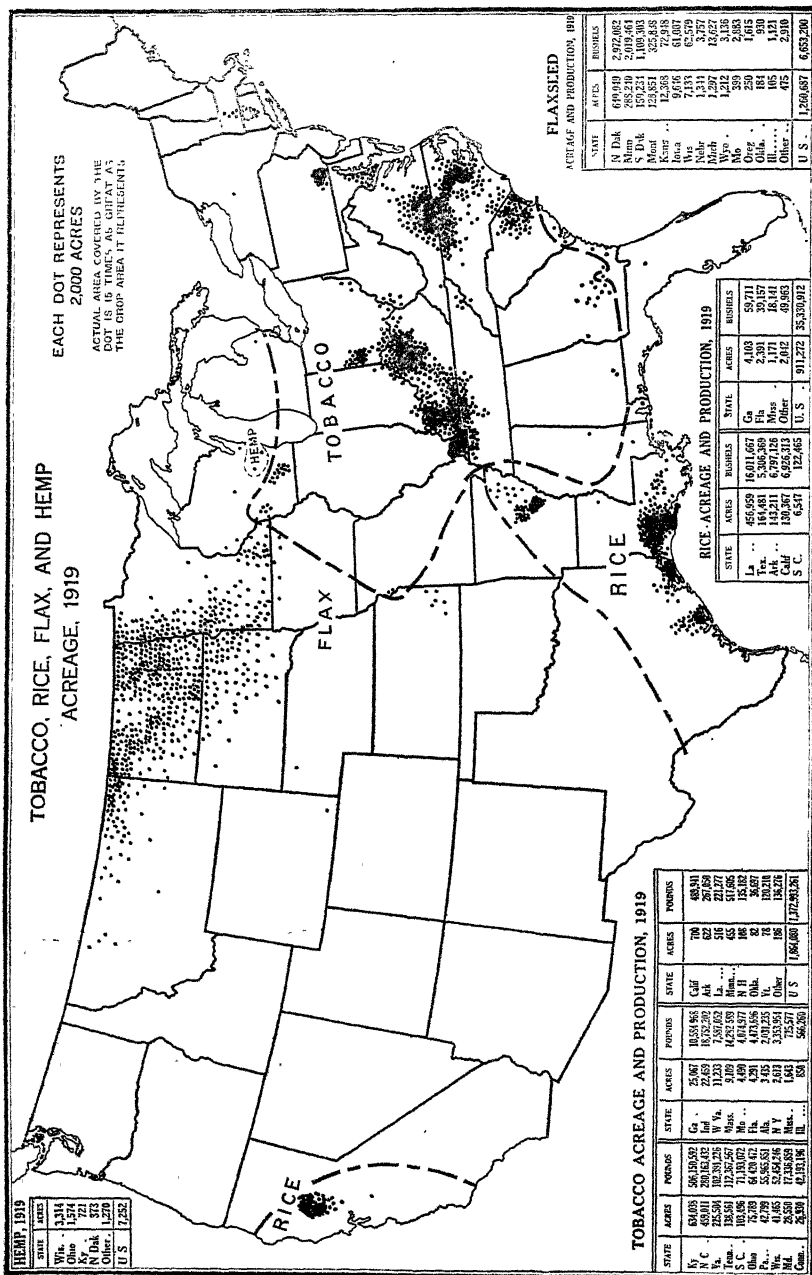


FIG. 37.—Nearly 90 per cent of the tobacco acreage is in six States—Kentucky, North Carolina, Virginia, Tennessee, South Carolina, and Ohio. But there are also important centers of production, especially of certain types, in southern Maryland, in Lancaster County, Pa., in the Connecticut Valley, and in southern Wisconsin. Tobacco is very sensitive to soil conditions, but these requirements vary with the different types.

Rice production is now largely confined to the coastal prairies of Louisiana and Texas, the prairie district of eastern Arkansas, and the flat valley of the Sacramento in California, all areas of heavy subsoils which hold the irrigation water.

Flax is grown in the Spring Wheat and Northern Great Plains Areas. Nearly half of the hemp is raised in Wisconsin.

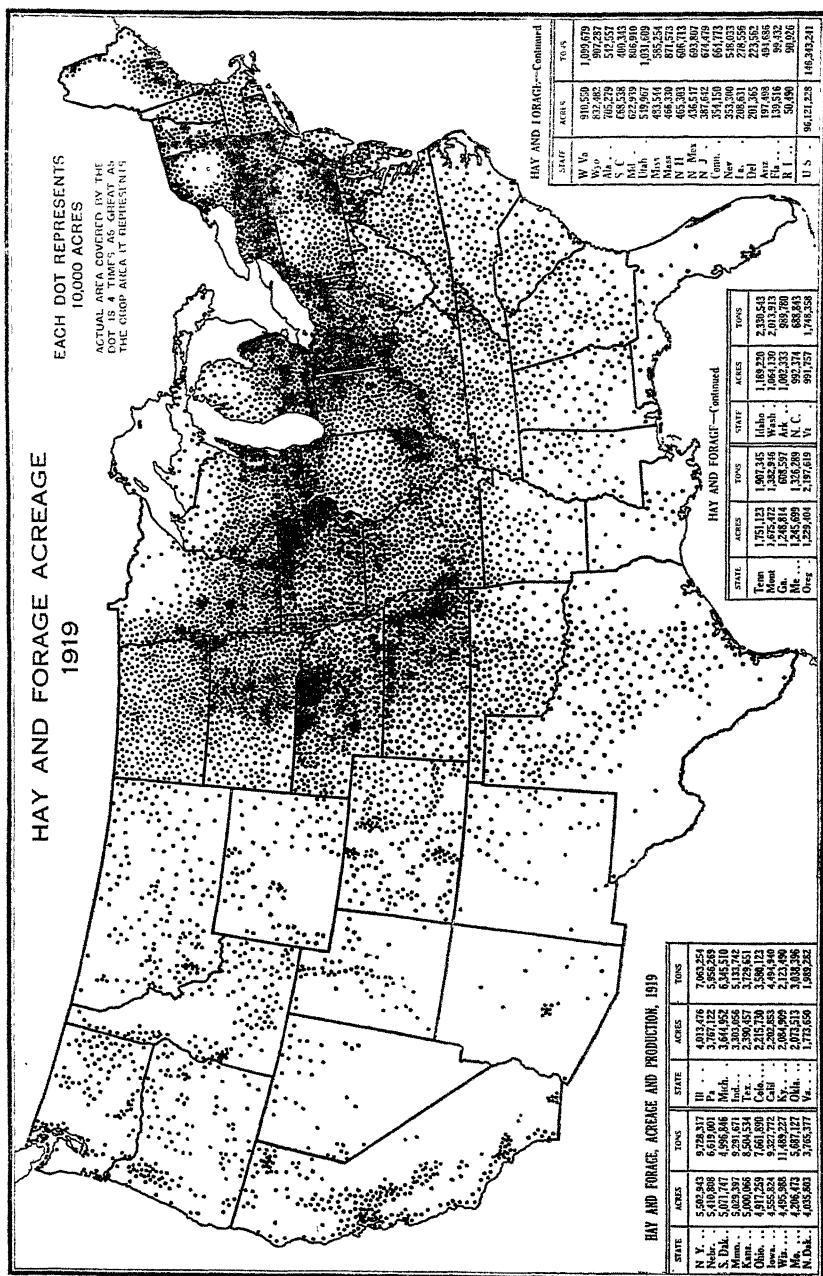


FIG. 38.—This map of hay and forage includes not only the hay crops but also corn and the sorghums cut for silage or fodder and root crops used for forage—13 items in all in the census schedule, of which 8 are shown in the following maps, and 3 have already been shown (figs. 25, 26, and 36). The hay and forage acreage, it will be noted, is largely concentrated in the Hay and Pasture Region and around the margin of the Corn Belt, the greatest State acreage being found in New York and the greatest tonnage production in Wisconsin. Relative to the acreage in crops, however, hay and forage is most important in the Rocky Mountain Region, where it occupies 55 per cent of the crop land.

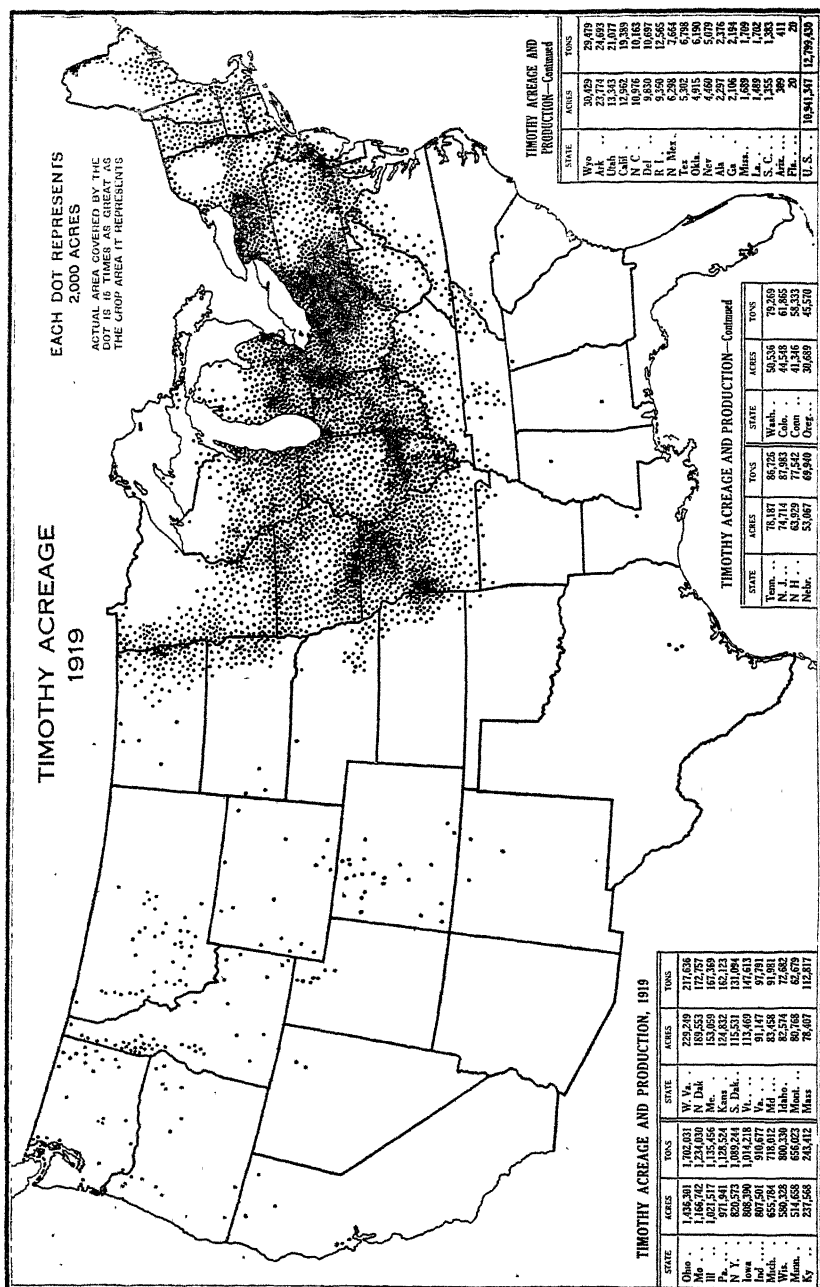


FIG. 39.—Timothy is practically confined to the northeastern quarter of the United States, except for a scattered acreage in the moister districts of the Rocky Mountain Region. The western margin of the timothy acreage in the Dakotas, Nebraska, and Kansas marks the beginning of the "Black-earth" belt, where lime has accumulated in the subsoil, of dense alfalfa acreage, and of dry-farming practices (see Figs. 6, 42, and 103). The southern boundary of timothy follows approximately the line of 200 days in the frost-free season, or 77° mean summer temperature. The districts of densest production in northern Missouri, southern Illinois, eastern Ohio, and western Pennsylvania have, in general, rather heavy and slightly sour soils.

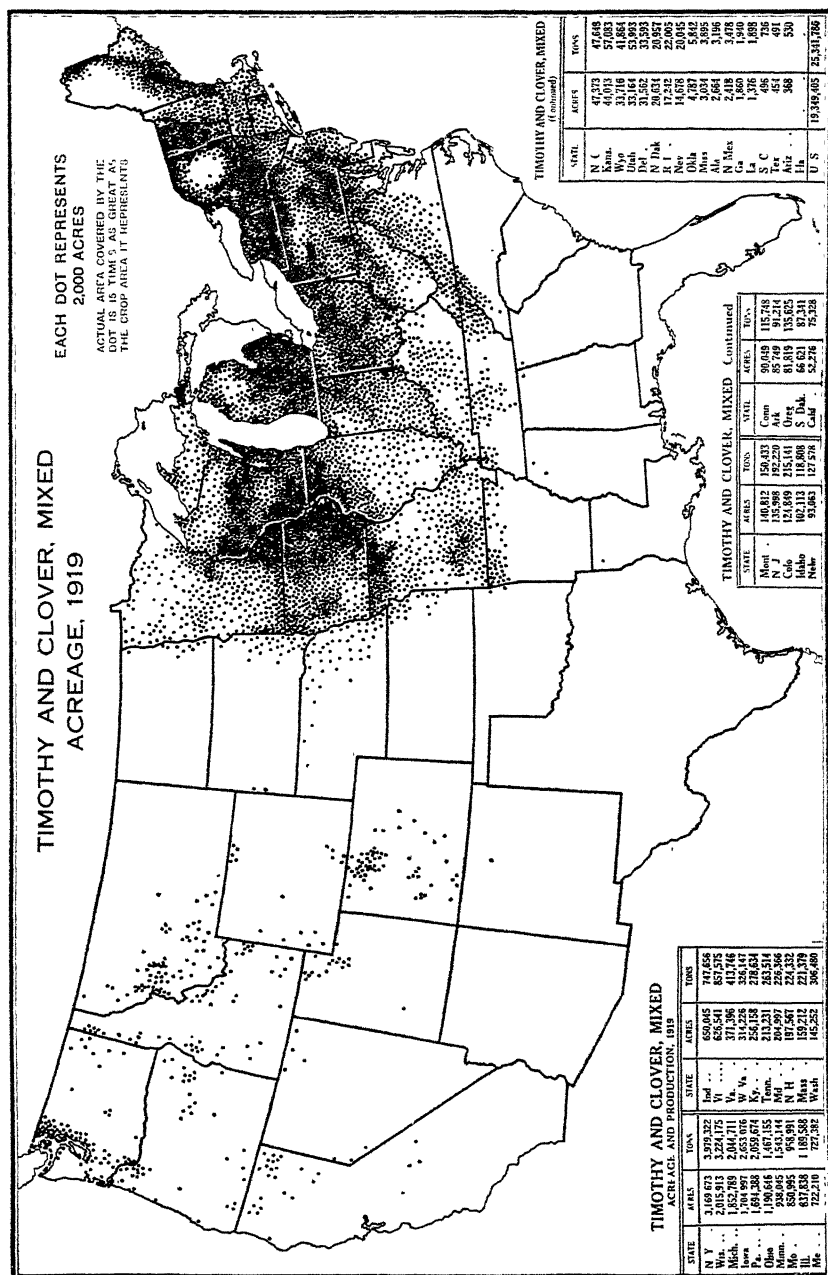


FIG. 40.—The acreage of timothy and clover mixed extends a little farther south and is somewhat more important in the West, especially in the North Pacific Region, than that of timothy alone. Clover is not as well adapted as timothy to heavy or sour soils, consequently, timothy and clover mixed is more important on the better soils—in southeastern Pennsylvania, western Ohio, southern Michigan, northwestern Illinois, and Iowa. In these sections timothy and clover commonly constitute the third year and sometimes the fourth year also, in a rotation, following corn and wheat or oats. About two-thirds of the acreage of timothy and clover mixed is in the Hay and Pasture Region. Compare with map of cotton acreage (Fig. 22) and of clover (Fig. 43).

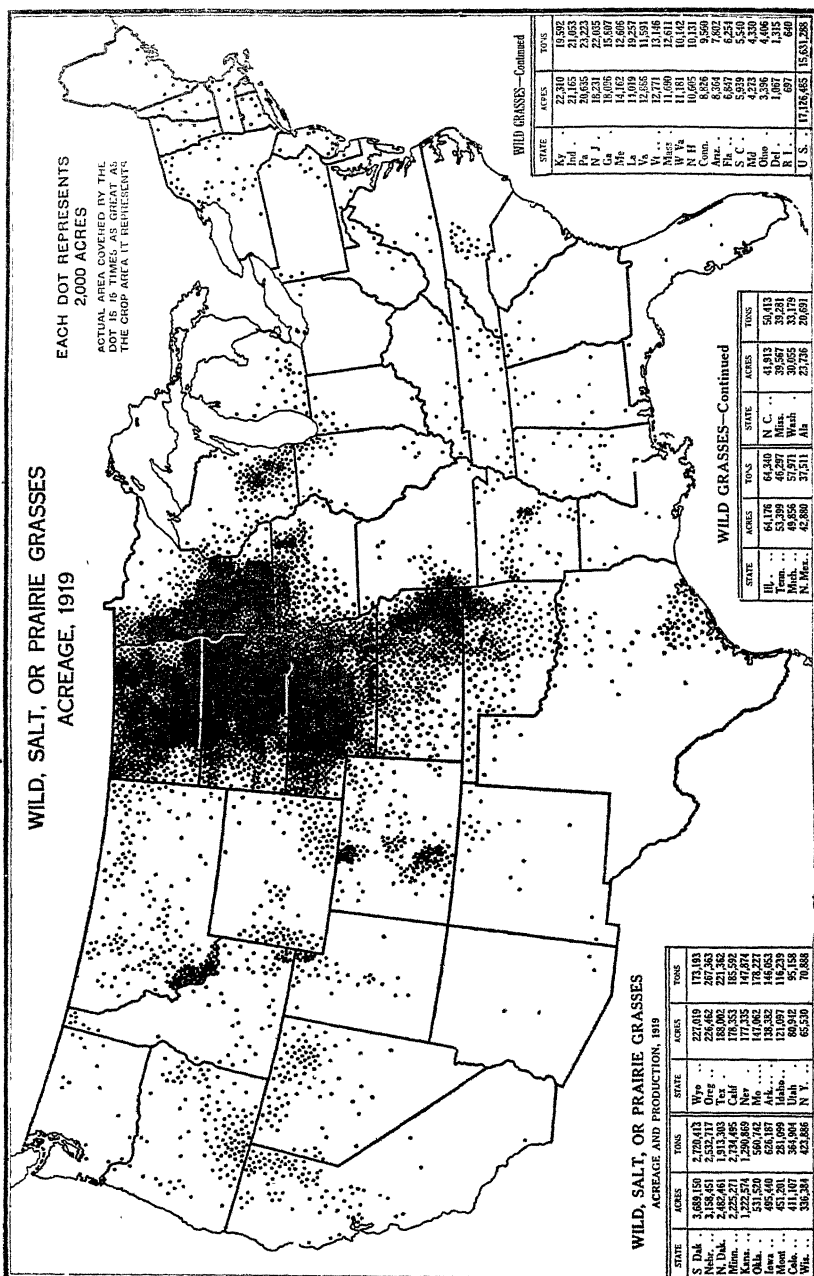


FIG. 41.—The acreage of wild or prairie hay is found mostly in the Spring Wheat Area, the western margin of the Corn Belt and Corn and Winter Wheat Region, and the eastern portion of the Great Plains; in brief, in the northern part of the subhumid belt. East of this belt the moister climate permits the cultivation of timothy and clover, which are more productive (see Figs. 39 and 40); and west of this belt the climate is so dry that the grass normally does not grow high enough to cut (see Figs. 4 and 7). The acreage shown in Wisconsin is mostly marsh hay and that in the Western States is located largely in moist mountain valleys or on high plateaus (see Fig. 3).

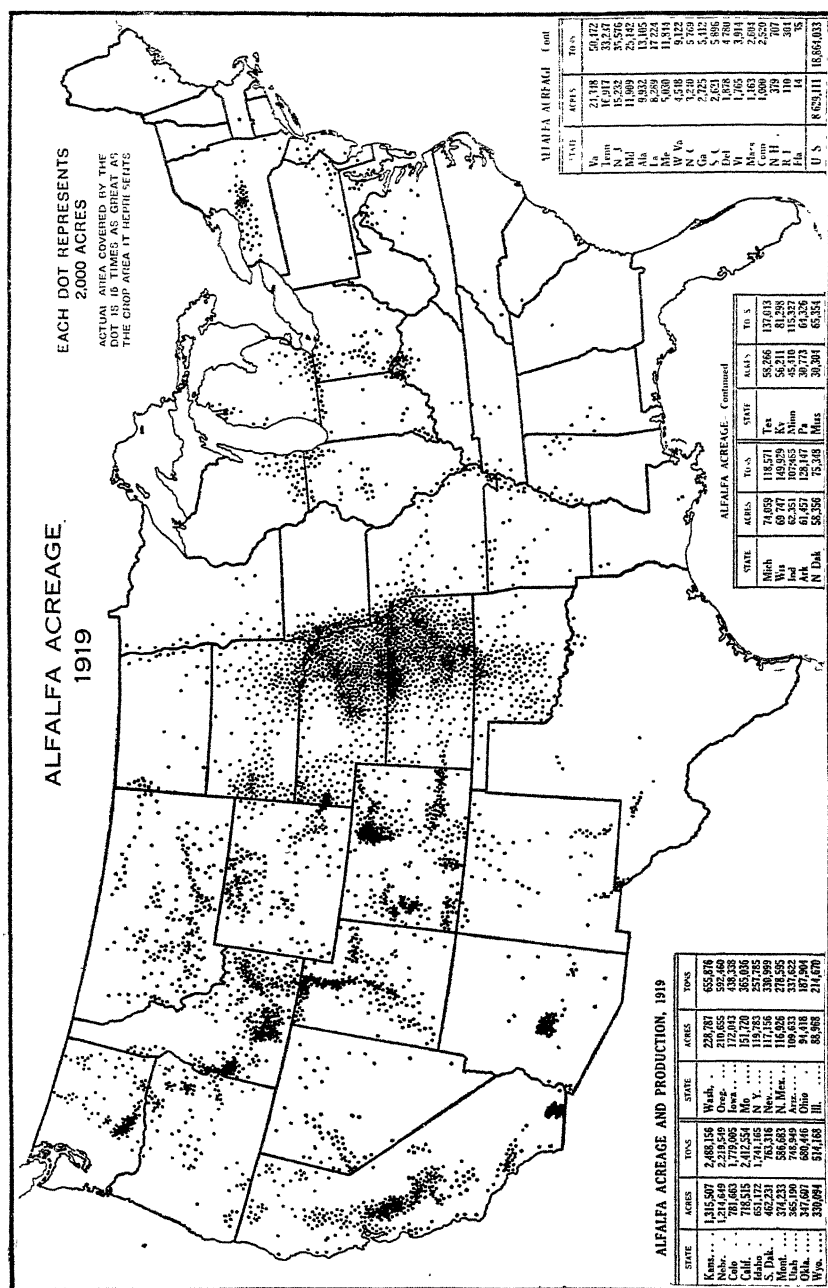


FIG. 42.—Alfalfa demands soils that are not acid, and it is most easily cured in a climate that is not rainy during the summer. Consequently, it thrives best in the Western States, where it is grown mostly under irrigation, and fairly well in the limestone sections of the East, where its culture is increasing rapidly. This increase has been notable in the slightly subhumid section of eastern Kansas and Nebraska, where the acreage has increased over sixfold in the past 20 years. Alfalfa replaces wild hay in this area as the major hay crop. Seven-eighths of the alfalfa acreage is west of the Missouri River (see Figs. 4, 6, and 16).

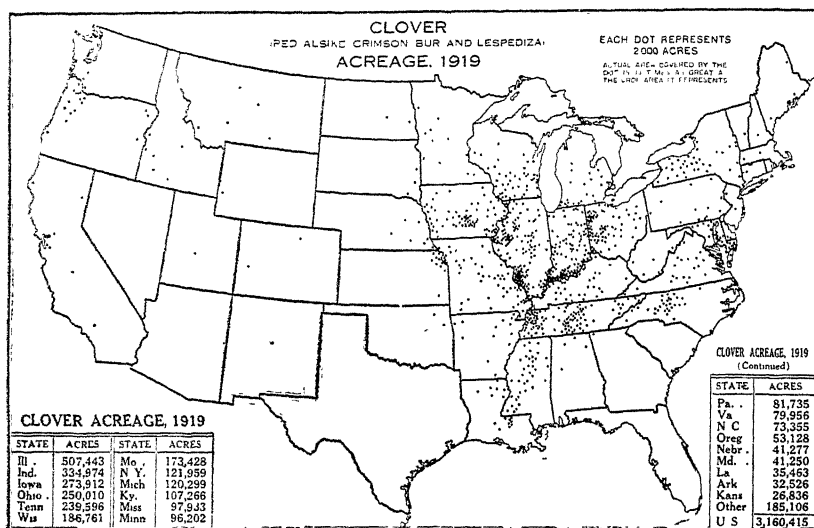


FIG. 43.—This map shows the acreage of clover grown alone (for timothy and clover mixed see Fig. 40). "Clover" may mean red, mammoth, or alsike clover in the Northern and Central States, crimson clover, a very different plant, in the coastal plain of Delaware, Maryland, and Virginia, bur clover in parts of the South, and was specifically stated in the census schedule to include lespedeza. Consequently, the map above, like that of wild hay, includes several different plants, all legumes, however. Most of the clover acreage, it will be noted, is located in the Corn Belt and the Corn and Winter Wheat Region, particularly along the lower Ohio River and up the Mississippi as far as St. Louis. Much of this clover is grown for seed as well as for hay.

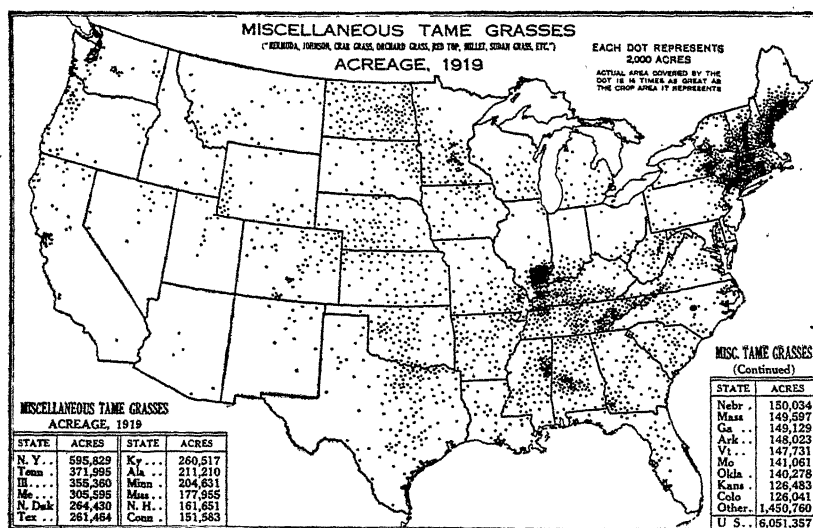


FIG. 44.—This map shows the geographic distribution of the census item entitled "Other tame or cultivated grasses cut for hay." In New England and New York it consists mostly of redbud, quack grass, orchard grass, and Canada blue grass; the dense center in southern Illinois is largely redbud; in the Black Prairie of Alabama and Mississippi, and in general throughout the South the dots represent Bermuda and Johnson grass principally; while in eastern Tennessee orchard grass and tall rye grass probably constitute most of the acreage shown. The scattered acreage in the States from North Dakota to Texas is almost wholly millet, Sudan grass, or amber cane.

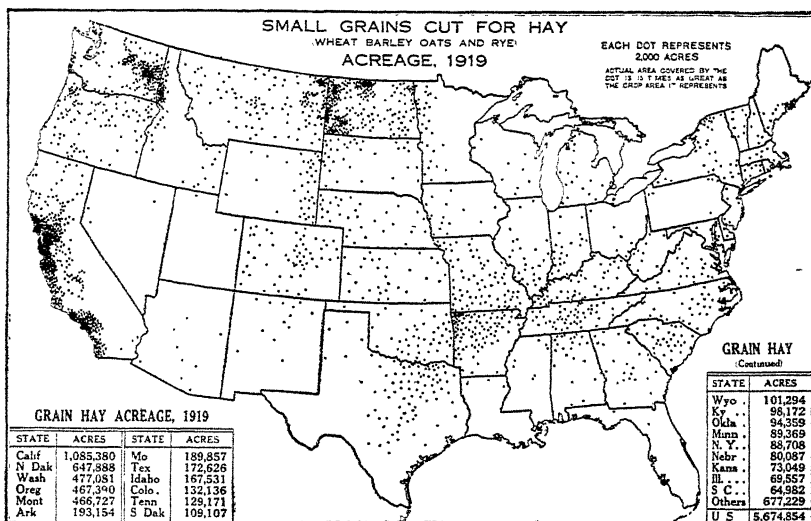


FIG. 45.—The small grains—barley, oats, wheat, and occasionally rye—are cut green for hay, mostly in the Pacific Coast States, where a hay crop is needed which will grow quickly during the cool, moist winters, and which need not survive the long summer drought. In California barley mostly is used, but in Washington and Oregon wheat and oats are more commonly cut for hay. The large acreage shown in North Dakota and eastern Montana is mostly wheat, and is doubtless larger than usual owing to the dry season which caused the crop in much of this area to be scarcely worth threshing.

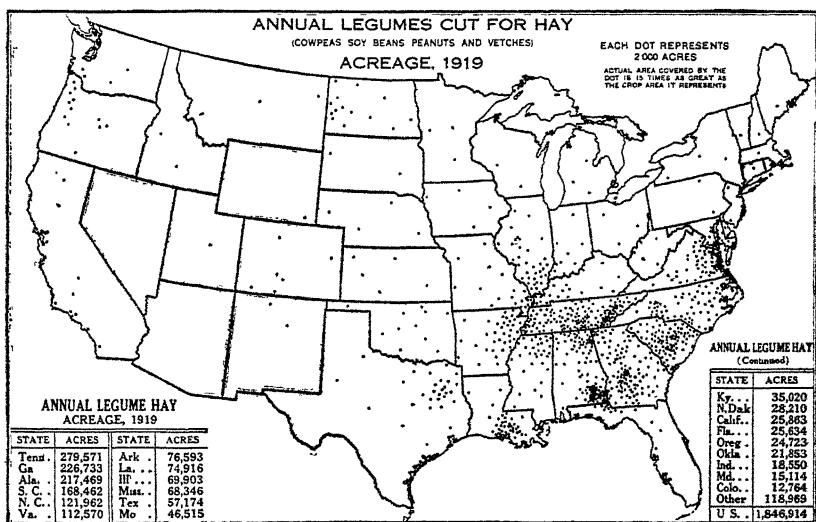


FIG. 46.—“Annual legumes cut for hay” was a new item in the 1920 census schedule, which revealed that nearly 2,000,000 acres of cowpeas, soy beans, and peanuts are cut for hay, mostly in the southeastern quarter of the United States. The dense center in southeastern Alabama and the more widely distributed acreage in Tennessee consist principally of cowpeas. The thinly scattered dots in the North and West are mostly soy beans, except in the North Pacific Region, where vetches are frequently grown for hay. Soy beans can be grown in a much cooler climate than cowpeas or peanuts, and are quite drought resistant.

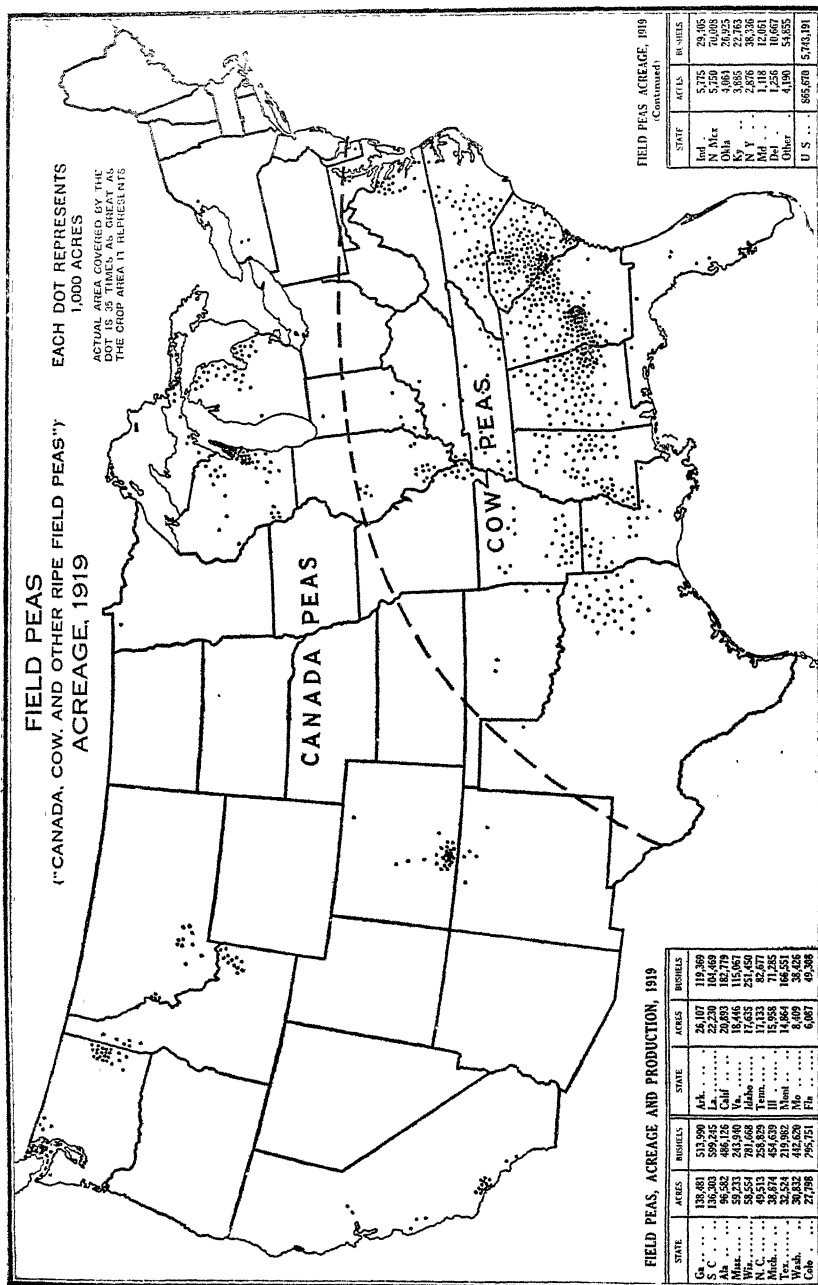


FIG. 47.—This map shows only the acreage of peas allowed to ripen for grain or seed. The acreage of green garden peas, even when grown in the field for canning, is shown in Figure 56. Peas cut for hay or forage are included in "Annual Legumes," Figure 46. Cowpeas, which are more like a bean than a pea, are of importance as a seed crop only on the Piedmont and Upper Coastal Plain of the South, extending as far north as Maryland and central Illinois. Canada peas, which thrive only in a cool climate, are grown mostly in Wisconsin, especially on the heavy soils of the Door Peninsula, in northeastern Michigan, and in the higher or cooler districts of the Rocky Mountain Region.

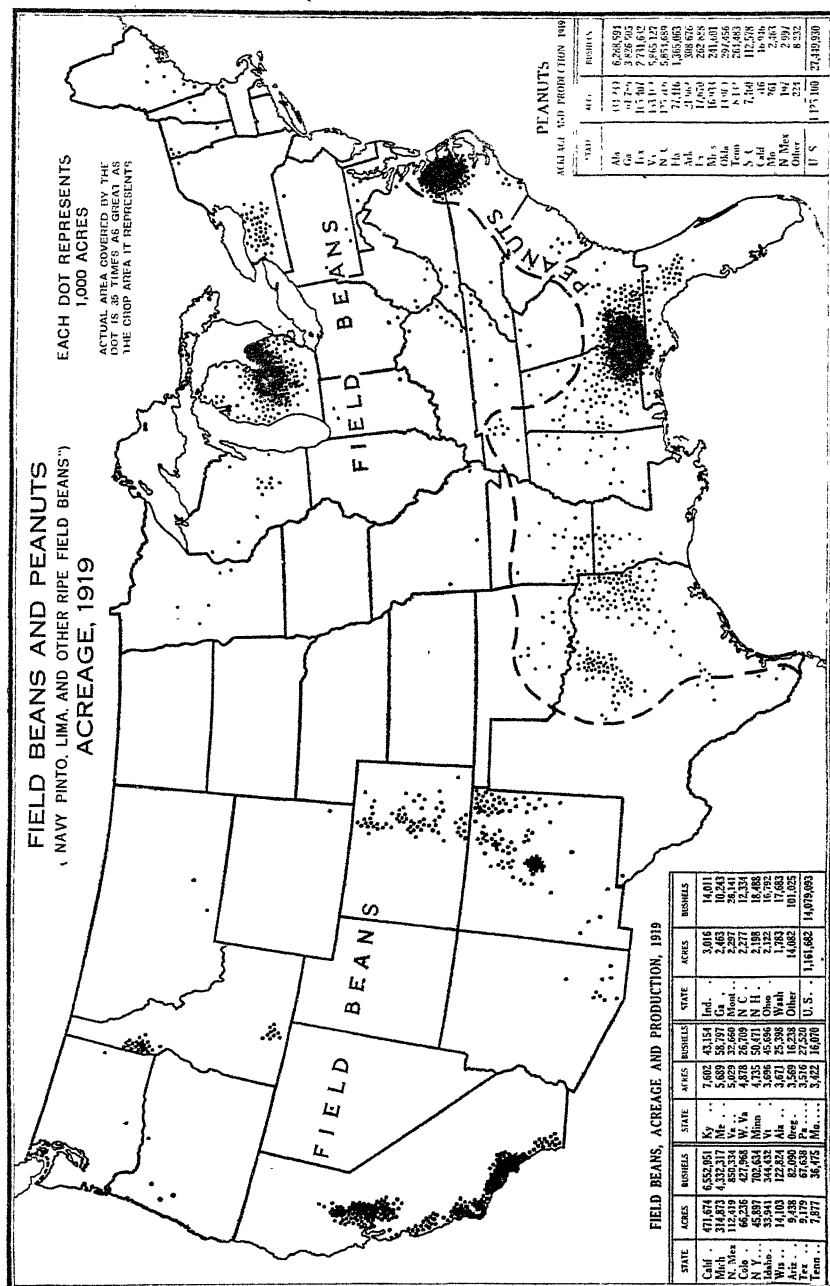


FIG. 48.—Field beans are produced principally in five areas—in western New York and central Michigan, where the leading varieties are white pea, white medium, and red kidney; on the high plains of New Mexico and eastern Colorado, where the native Mexican or pinto bean mostly is grown; in California, where practically the entire commercial crop of limas and nearly half of the crop of white beans is raised; and in Idaho, where both the white and Mexican, also various other varieties, are grown and shipped to all parts of the United States to use as seed.

The acreage of peanuts shown on the map does not include the crop "hogged off" by stock. The peanuts for human consumption are grown mostly in the North Carolina-Virginia district; those grown in Georgia and Alabama are largely fed to hogs or made into peanut butter.

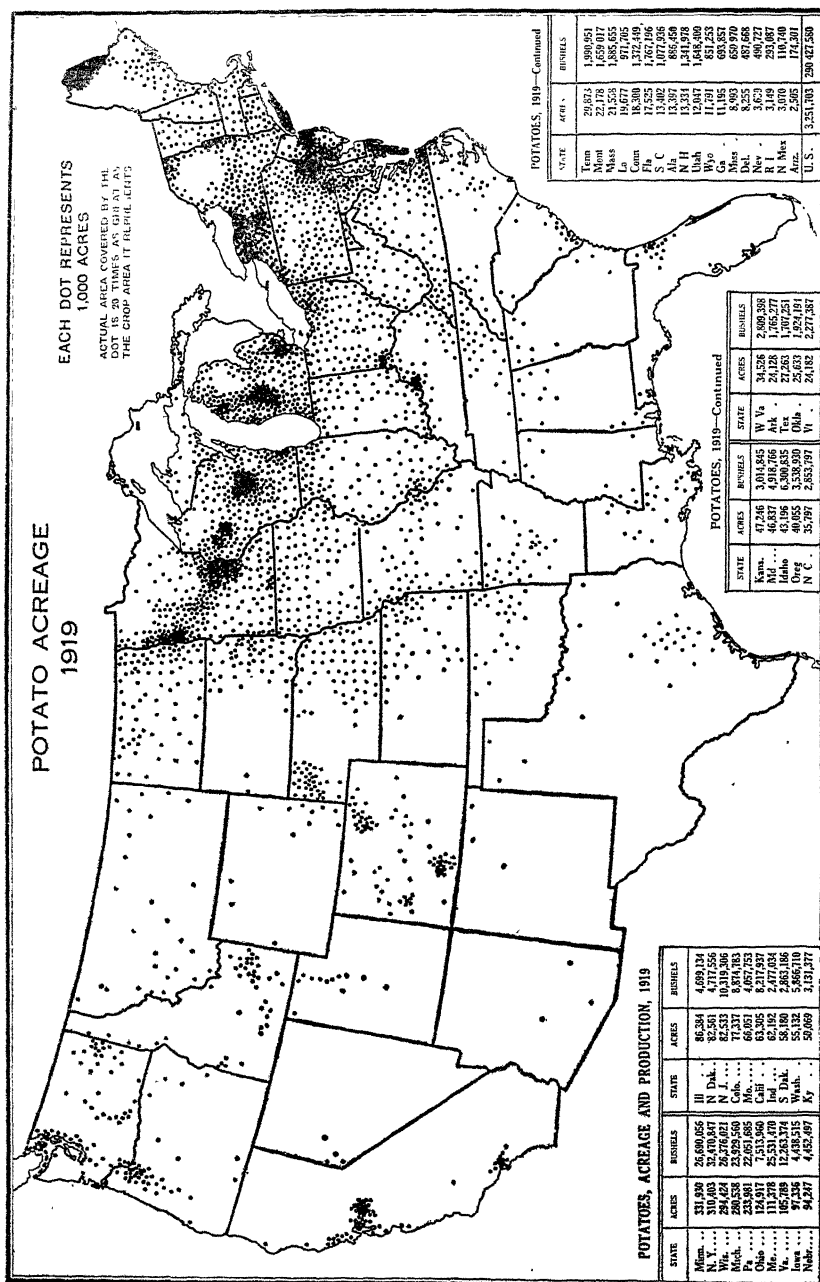


FIG. 49.—The regions of heaviest potato production lie to the north of the Corn Belt. This is due partly to the fact that the quality and yield of potatoes are better in regions of cool climate, and partly to the fact that corn, which requires labor at the same time, is very productive and gives a greater return. Many of the large centers of potato production are in regions of sandy or loamy soils—Aroostook County (Me.), Long Island, New Jersey, eastern Virginia, western Michigan, central Wisconsin, and Anoka County (Minn.). Many of the minor centers of production are located near large cities, since potatoes are a bulky crop, expensive to transport, and can be sold at a profit by local gardeners and farmers in competition with the crop from the large production centers.

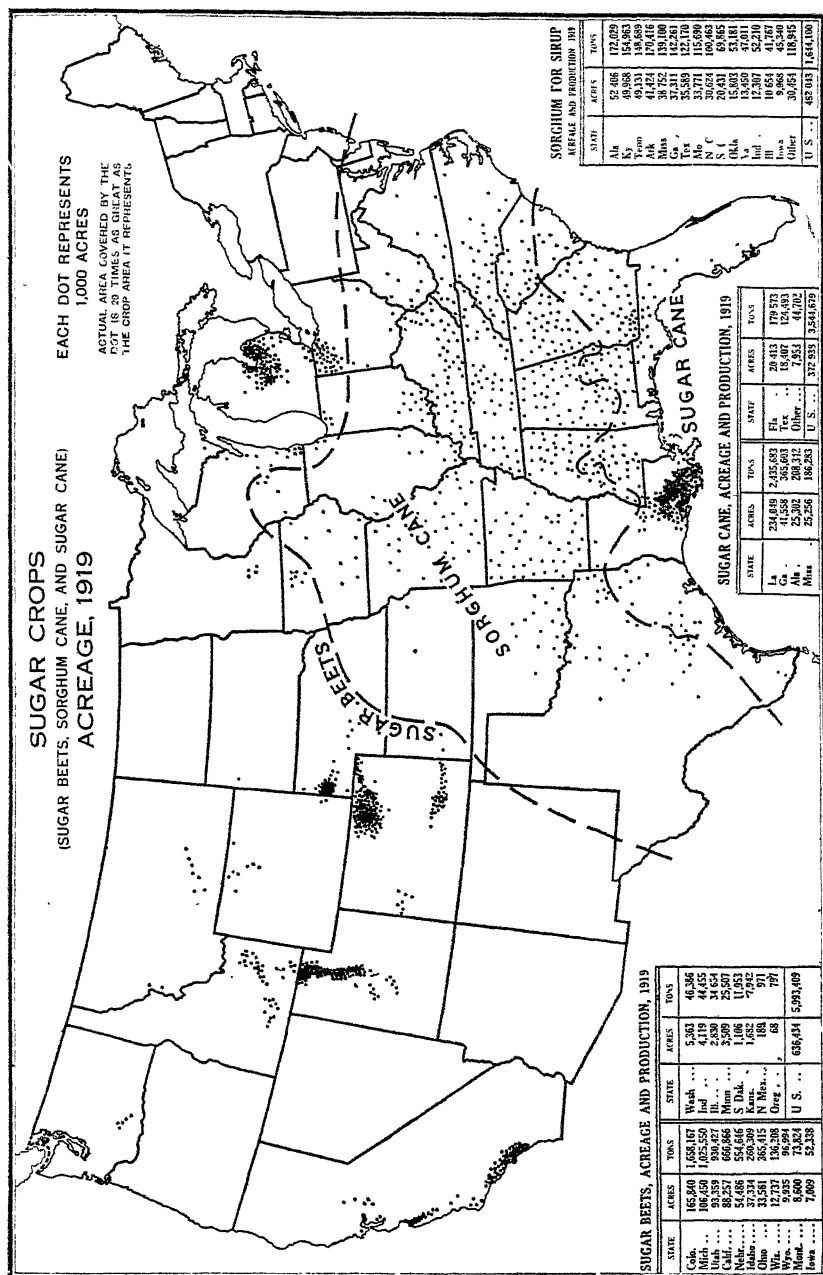


FIG. 50.—The two more important commercial sugar crops are cane and beet. The acreage of sorghum cane is greater than that of sugar cane, but the sirup is mostly made from the sorghum on the farm and does not enter into commerce. Sugar beets do not, in general, show a sufficiently high sugar content to be manufactured profitably where the summer temperature is over 72°, and the beets must also then compete with corn for the farmer's labor. Sugar cane is not grown commercially for sugar outside of the almost frost-free lower Mississippi Delta of Louisiana. The broad belt between the sugar-beet and sugar-cane areas is occupied by a thin and scattered acreage of sorghum cane.

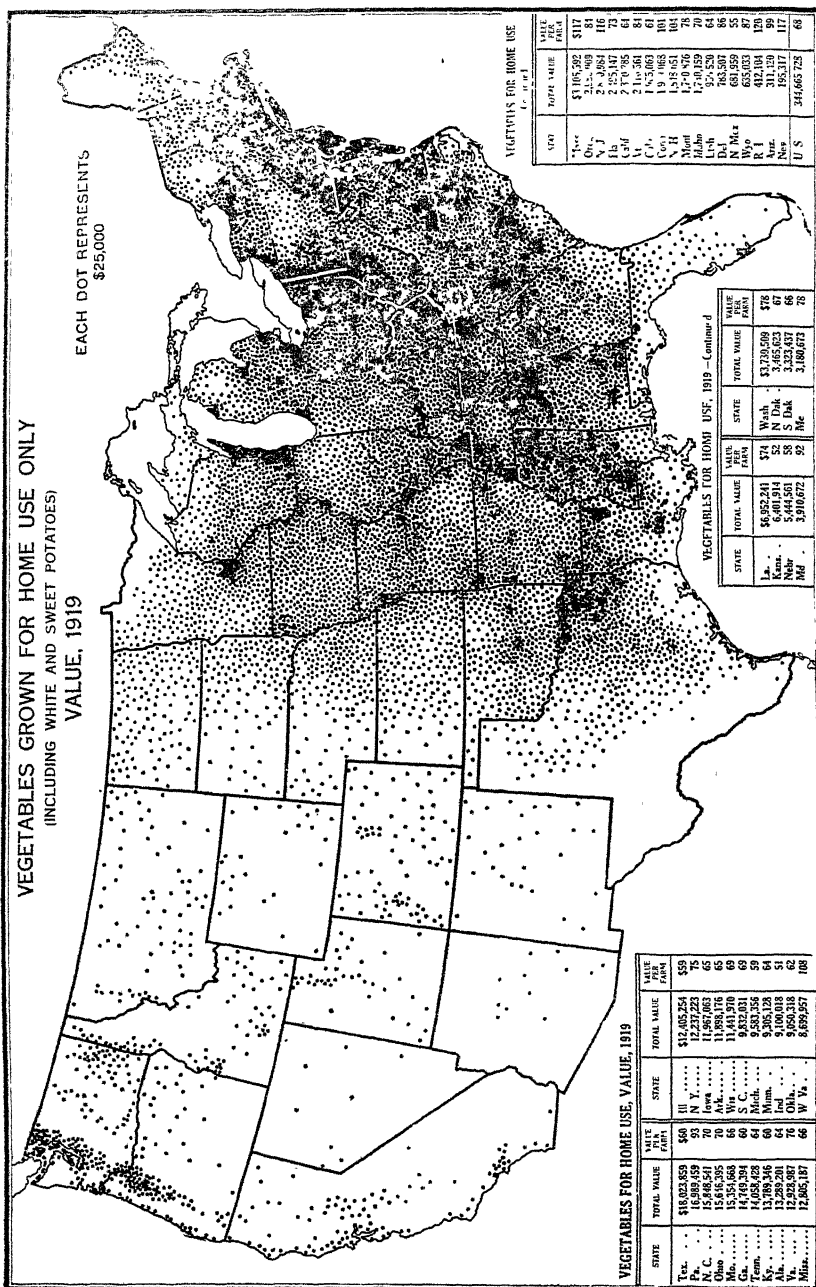


FIG. 51.—The census of 1920 was the first to separate vegetables grown for home use from those grown for sale. The areas of densest production of vegetables for home use are southeastern Pennsylvania, the upper Ohio Valley, the mountainous districts of eastern Kentucky and Tennessee and of northern Alabama, the upper Piedmont of the Carolinas and Georgia, and much of Mississippi, also the Lake Michigan shore counties of Wisconsin, southeastern Michigan, and central New York—areas of small farms owned by frugal people (see Figs. 98 and 99). The average size of the farm garden, however, is apparently, greatest in Virginia and Massachusetts, about one-half acre, and smallest in the prairie and plains States, about one-fifth acre.

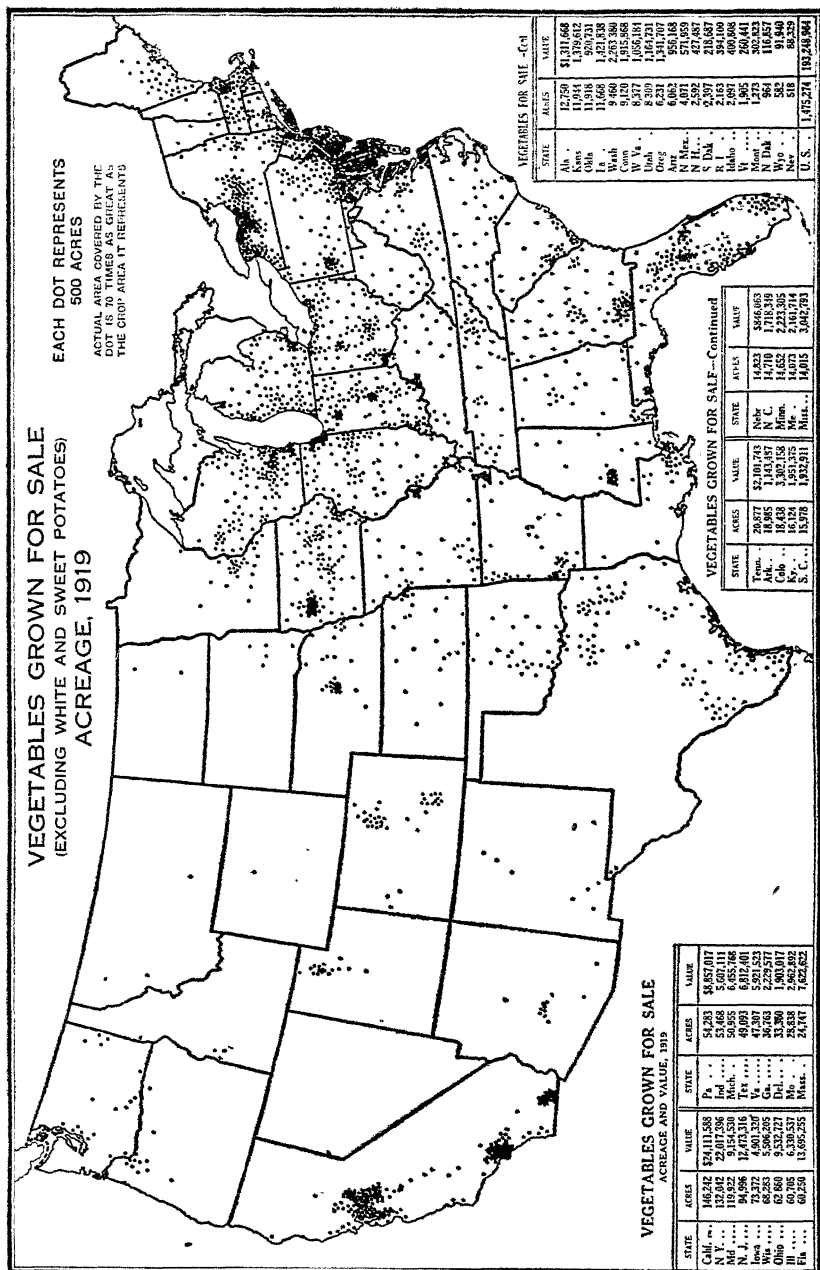


FIG. 52.—The most important area of vegetable production extends from New York City to Norfolk, Va. In this area about one-fifth of the Nation's commercial crop is produced. A second important area extends from Utica, N. Y., west to Buffalo and Erie. Another belt surrounds the southern half of Lake Michigan. Florida and southern Georgia, where perhaps one-third of the winter vegetables are grown, may be said to constitute a fourth area. California possesses three important areas—the Sacramento-Stockton district, the Los Angeles district, and the Imperial Valley. In California also the winter crop is important. Smaller centers of production adjoin most of the large cities. The centers shown in western Iowa and Nebraska represent pop corn.

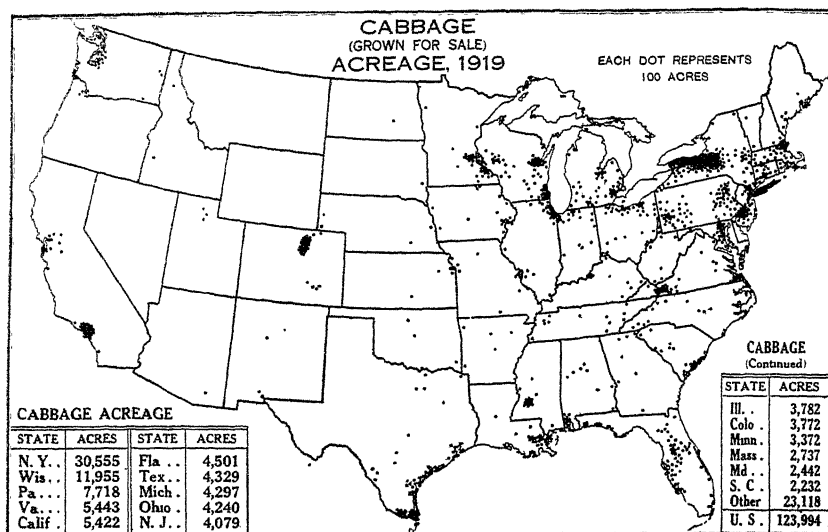


FIG. 53.—The principal cabbage-producing districts are in the North, the largest being the belt of counties in New York from Buffalo to Syracuse. In this district nearly one-quarter of the Nation's acreage is found, mostly on the muck lands and the Clyde series of soils. Other important districts are Long Island, N. Y.; Burlington and Gloucester Counties, N. J.; around Norfolk and in Wythe County, Va.; along Lake Michigan from Chicago to Milwaukee; in Green Bay County, Wis.; around Denver, Colo., and Los Angeles, Calif. Early cabbages are raised mostly in Florida, in the Young's Island (S. C.) district, in Copiah County, Miss., and in southern Texas.

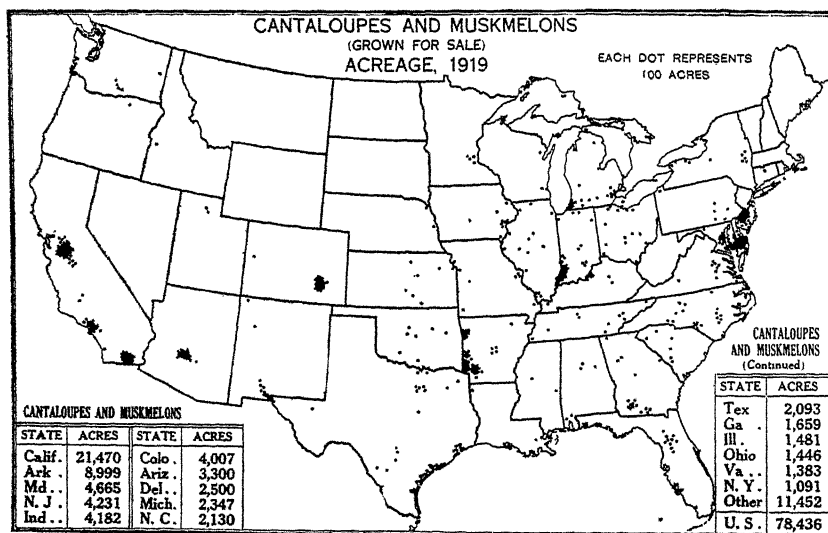


FIG. 54.—The principal cantaloupe-producing districts are now located in the West, California having over one-quarter of the Nation's acreage. The most important western districts are in Stanislaus (Turloc district), Los Angeles, and Imperial Counties, Calif.; in the Salt River Valley (Phoenix district) of Arizona; and the Arkansas Valley (Rocky Ford-Ordway district) of Colorado. In these five districts nearly 40 per cent of the Nation's acreage was found in 1919. Arkansas ranked next to California in acreage, the principal districts being located in Hempstead and Sevier Counties. Other important districts are Gibson and Knox Counties in Indiana, Sussex in Delaware, Gloucester in New Jersey, and Mitchell County (Pelham district), Ga.

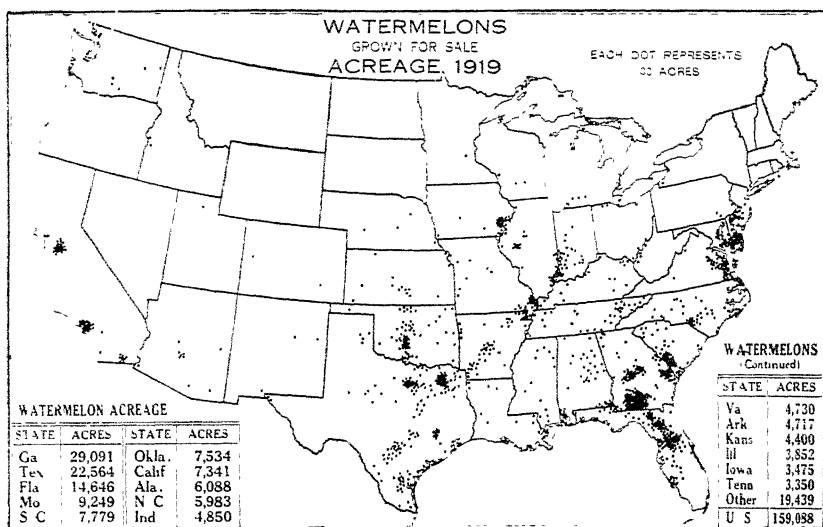


FIG. 55.—The principal watermelon-producing districts are in the South, Georgia and Texas having nearly one-third of the Nation's acreage. The most important districts in Georgia center around Valdosta and Thomasville, and in Texas around Sulphur Springs. Florida ranks next in importance, but the acreage is more scattered. There is an important center in Barnwell and Hampton Counties, S. C., in Scotland County, N. C., and a less dense acreage along both shores of Chesapeake Bay in Virginia and Maryland. Dunklin and Scott Counties in southeastern Missouri are other important districts, also Grady County, Okla., and Stanislaus and Los Angeles Counties, Calif.

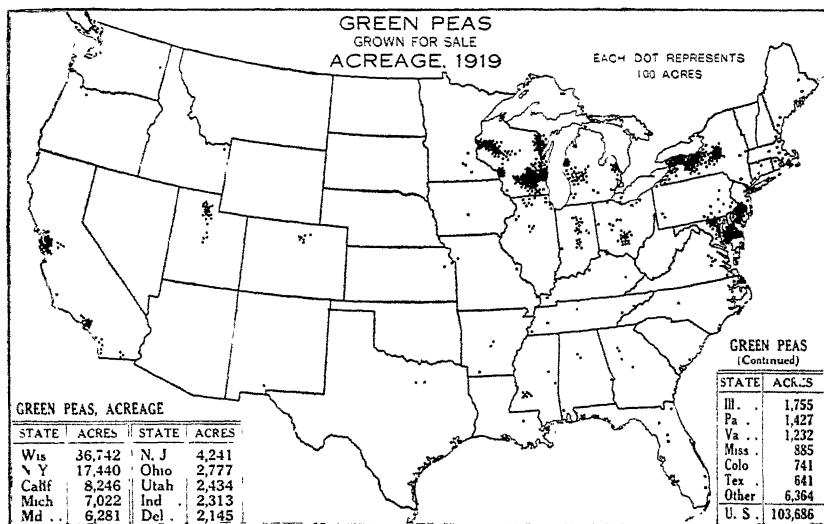


FIG. 56.—Green peas, like cabbages, are a cool-climate crop, but in pea production Wisconsin is more important than New York, having, indeed, one-third of the Nation's acreage. The Wisconsin districts include Columbia, Dodge, Green Lake, Sheboygan, and Washington Counties in the southeast, Barron and Chippewa Counties in the northwest, and Marinette and Oconto in the northeast. The New York district, which ranks next in importance, extends from Buffalo to Utica. Eastern Maryland and Delaware rank third in importance, followed by California (San Francisco Bay district) and Michigan. A small acreage is found in southern New Jersey, and in the Salt Lake district and Jordan Valley of Utah.

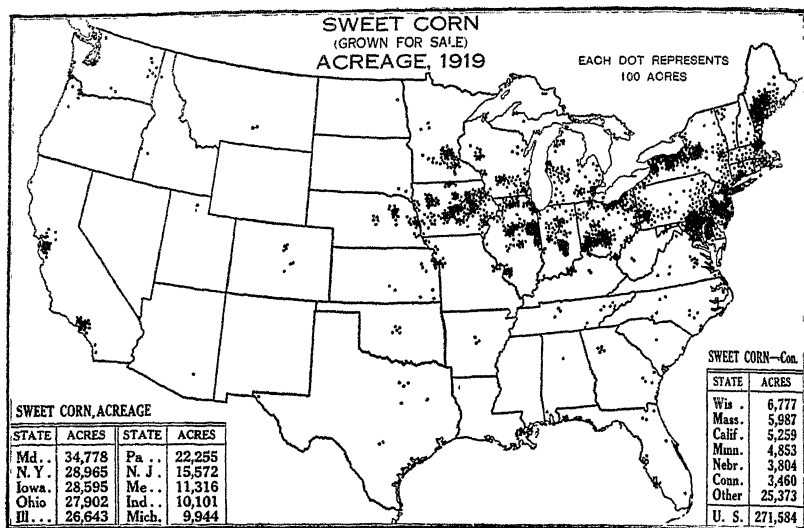


FIG. 57.—Sweet corn is primarily an eastern, middle-latitude crop, but it is extensively grown also in New York and New England, owing in large measure to the excellent quality produced, and the fact that it need not mature. Maryland ranks first in acreage, followed by New York, Iowa, Ohio, Illinois, and Pennsylvania in close succession. New Jersey, relative to its area, has a large acreage. The acreage in these States is concentrated in a few counties, as can be seen on the map. It is interesting to note that although there is almost no corn grown for grain in Maine or California (see Fig. 24), there is a considerable acreage of sweet corn in these States.

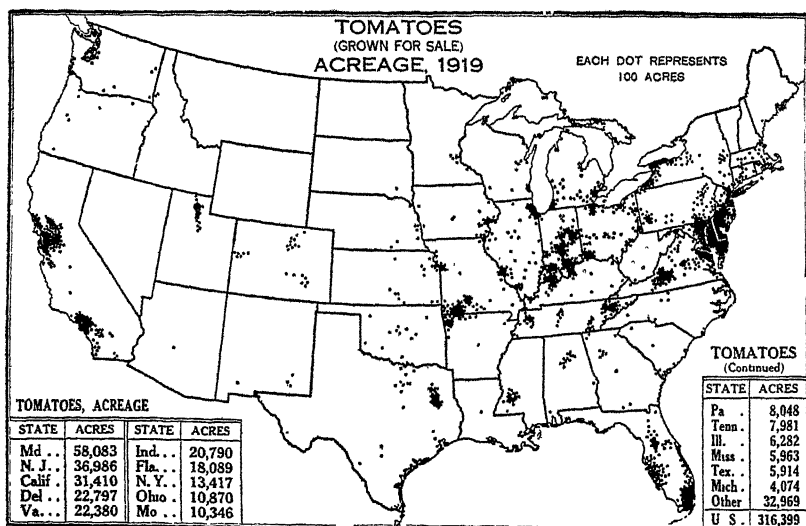


FIG. 58.—Tomatoes are grown for sale in almost all parts of the United States, except in the Spring Wheat, Northern Great Plains and Arid Intermountain Plateau regions. The eastern Maryland, Delaware, and southern New Jersey districts include over one-third of the Nation's acreage, and the Los Angeles and San Francisco Bay districts in California about one-tenth. Virginia and Indiana rank next in importance, followed by Florida, which produces most of the winter crop. Other important early-tomato districts are located in Copiah County, Miss., and Cherokee County, Tex. Tomatoes lead all the vegetables grown for sale in the United States (other than potatoes and sweet potatoes), both in acreage and value.

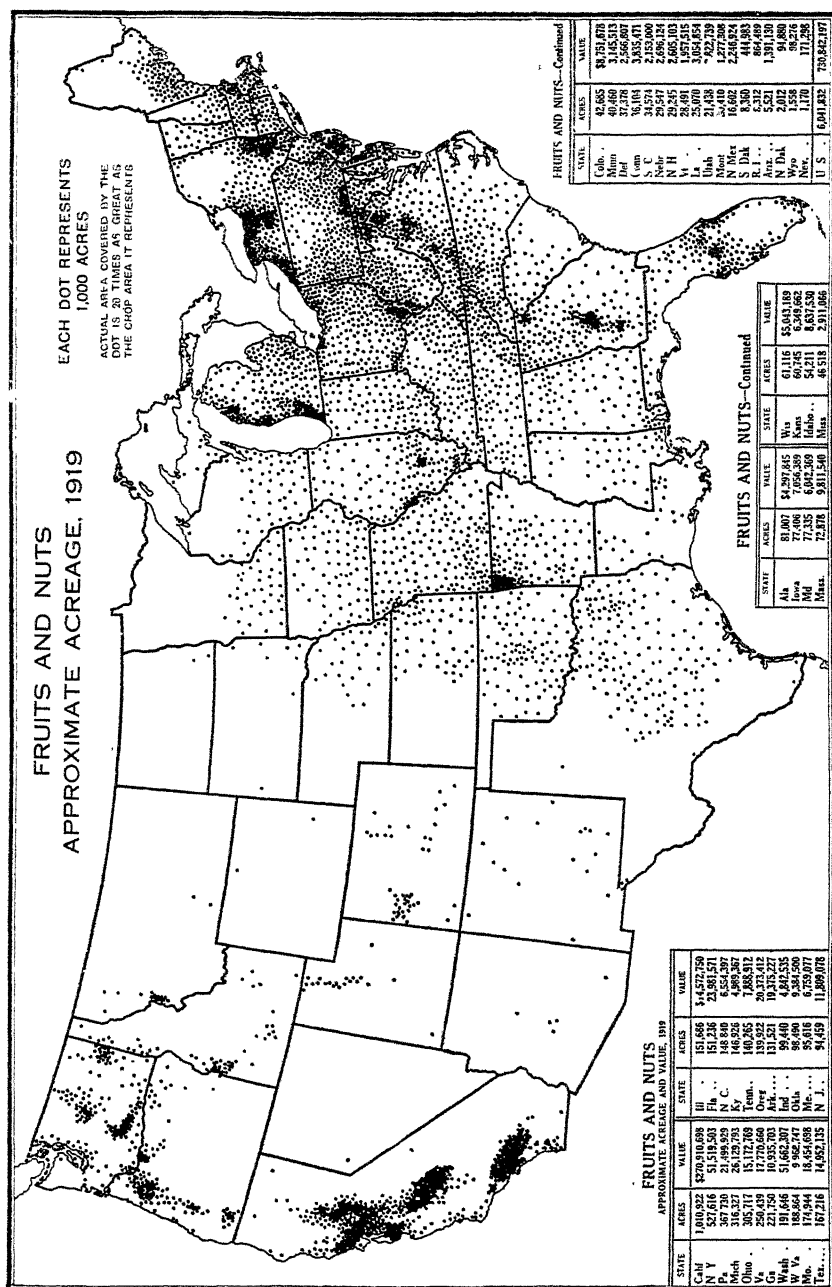


FIG. 59.—California contributed over one-sixth of the Nation's acreage of fruits and nuts in 1919 and over one-third of the value. The district in southern California consists mostly of citrus fruits, walnuts, and apricots (see figs. 68 and 69); the central (San Joaquin Valley) district, of raisin grapes, peaches, and apricots, with some citrus fruits in the eastern foothills (Figs. 64, 65, 67, and 68); and the northern districts of peaches and apricots, plums and prunes, grapes, walnuts, and almonds, with apples near the cool coast, and pears in the foothills. The dots in Florida represent mostly citrus fruits, those in the cotton belt, especially Georgia and Texas, peaches mostly and pecans; elsewhere in the United States, with few exceptions, the apple is the dominant fruit (Figs. 60, 61, 62, and 63).

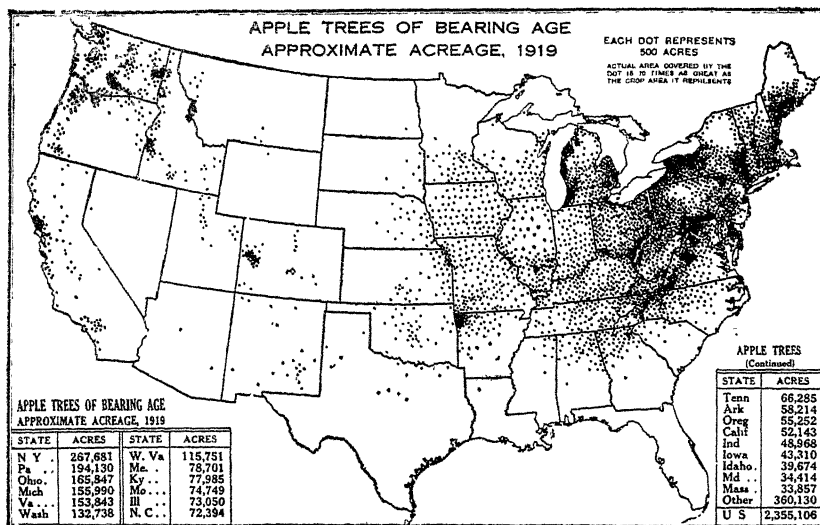


FIG. 60.—About 15 per cent of the acreage of apple trees of bearing age was in the West in 1920, and nearly half of this western acreage was in the State of Washington. New York, Pennsylvania, Ohio, Michigan, and Virginia, however, exceeded Washington in acreage. Most of the apple acreage of the Nation is found in the Hay and Pasture Region from Maine to West Virginia and Michigan, where the climate is cool, but owing either to lake or mountain protection, the winters are moister and less severe than in the interior of the continent. The southern limit of the apple area extends only a little beyond the northern limit of cotton, and the western, or moisture limit, is about that of timothy (see Figs. 22 and 39).

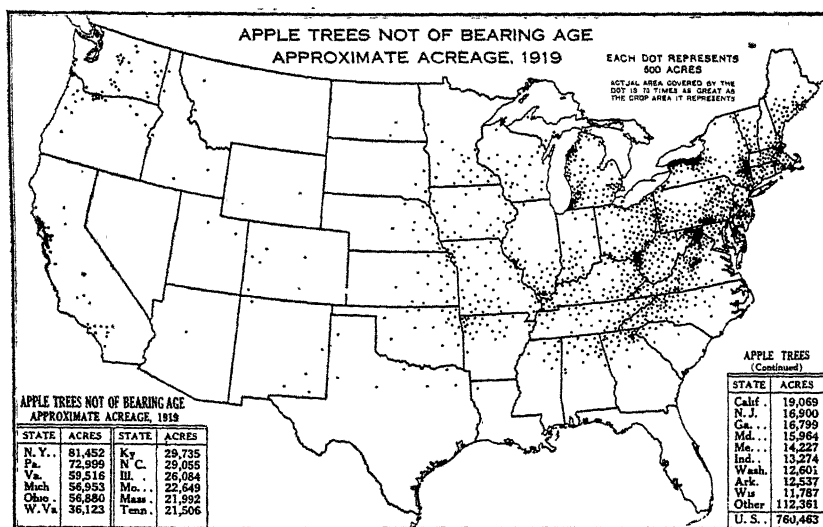


FIG. 61.—There has been very little planting of apple orchards in the West in recent years, the higher freight rates increasing the difficulties of competition with eastern-grown fruit. Less than 9 per cent of the apple trees not of bearing age were in the West in 1920. Most of the acreage of young trees, it will be noted on the map, is located along the shore of Lake Ontario in New York, in the lower Hudson Valley, in New England, along the Appalachians from Pennsylvania to Georgia, in the upper Ohio Valley, along the Lake Michigan shore of Michigan, and in the Sonoma Valley of California. Trees not of bearing age numbered 36 million in 1920 as compared with nearly 66 million in 1910.

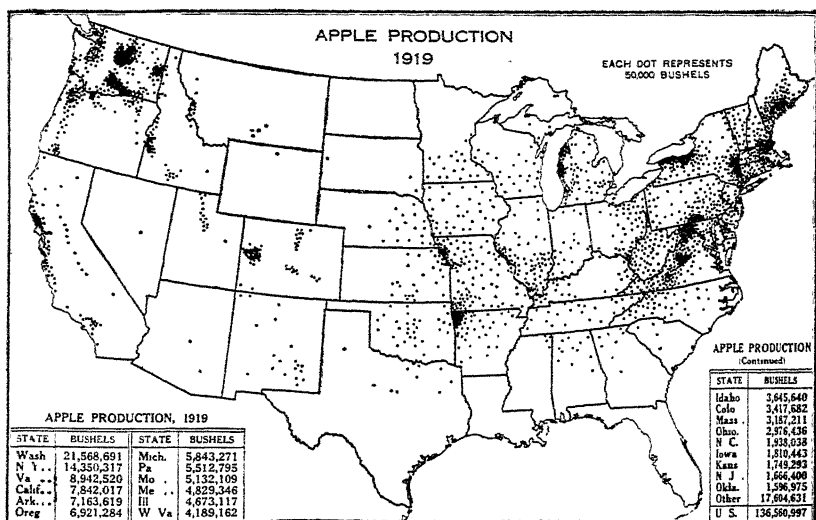


FIG. 62.—The West produced one-third of the apples grown in 1919, despite the fact that it possessed only one-seventh of the acreage of bearing trees. Washington led all States in production, with a total almost equal to that of New York and Virginia combined. The three famous apple districts of Washington—the Yakima Valley, the Wenatchee Valley, and Spokane County—stand out clearly on the map; also the Hood River and Willamette Valleys of Oregon, the Boise, Idaho, district, the Sonoma Valley in California, and the Grand Junction-Delta-Montrose district of Colorado. In the East, the New England area, the two noted New York districts, the Appalachian, the western Michigan, the Ozark, and the northwestern Missouri districts are the most important.

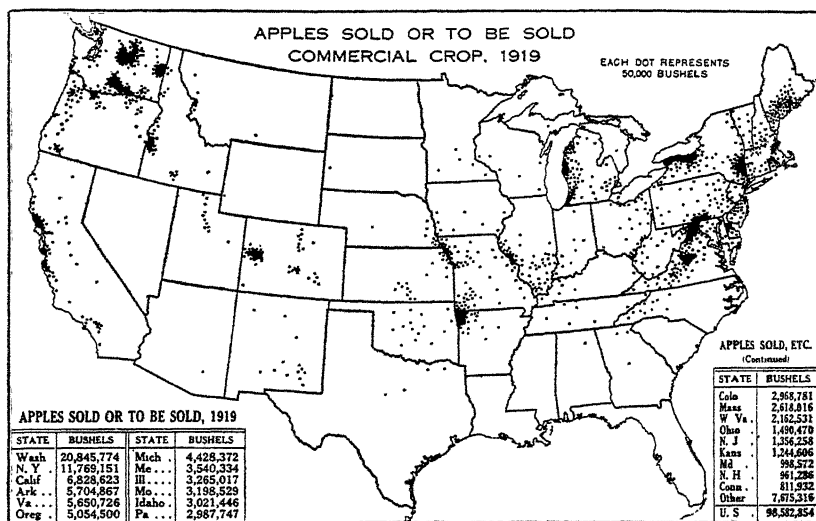


FIG. 63.—The commercial crop of apples in 1919—that is, the quantity “sold or to be sold”—was nearly 100 million bushels, according to the census, constituting three-fourths of the total crop. The West produced over two-fifths of this commercial crop, Washington alone reporting over one-fifth of the total quantity in the United States. Eighty per cent of the commercial crop was produced in the 15 apple districts already referred to. It will be noted that the production of the commercial crop of apples is more concentrated than the total production, and the total production in turn, more concentrated than the acreage. Diseases and pests diminish the production of the unsprayed home orchards several years before they kill the trees.

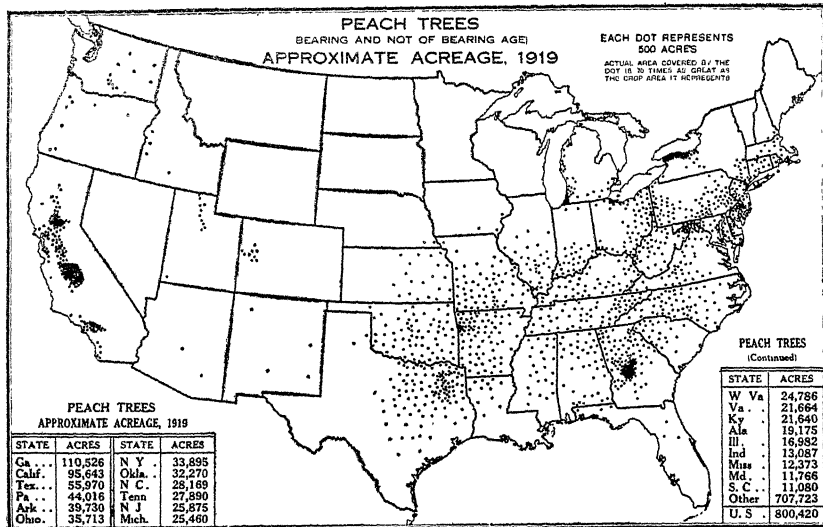


FIG. 64.—Three major centers of peach acreage are shown on the map—the early peach district in central Georgia, the late peach district along Lake Ontario in New York, and the cunning and dried peach districts in California. An important peach district is rapidly developing in Moore County, N. C. Minor centers may be noted in southern New Jersey, in western Maryland and adjacent counties of West Virginia, along the Michigan shore of Lake Michigan, in western Arkansas, and in northeastern Texas. Cold, dry winters prevent peaches being grown to the northwest of a line drawn from Chicago to Omaha, thence to Amarillo, Tex. The influence of the Great Lakes in tempering winter temperatures on their leeward shores and retarding growth in spring till danger of frost is past is evident on the map.

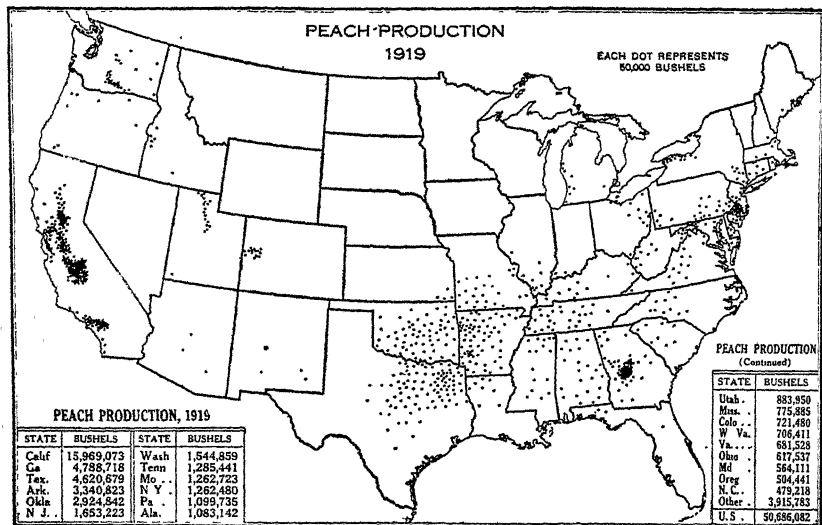


FIG. 65.—California produced nearly one-third of the Nation's crop of peaches in 1919, Fresno County alone producing one-tenth. Georgia ranked second, with Texas a close third. The New York crop was greatly reduced by a late freeze, but the New Jersey crop was large. It is worth noting that the production of peaches this year did not extend nearly as far to the north and west as the acreage. The Yakima Valley in Washington, the peach belt east of Great Salt Lake in Utah, and the Grand Junction-Delta district in Colorado show a production disproportionate to the acreage. The season of 1919 was generally favorable. Although the number of bearing peach trees in the United States dropped from 94 million in 1910 to 65 million in 1920, the production was 40 per cent greater in 1919 than in 1908.

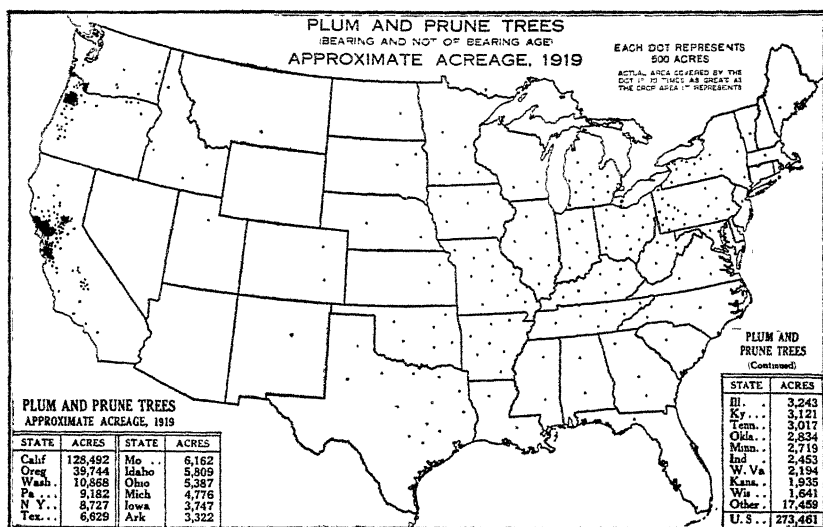


FIG. 66.—Nearly half of the Nation's acreage of plum and prune trees is in California, and nearly a third is in the five counties of Santa Clara, Sonoma, Placer, Napa, and Solano. One-twelfth more is in Marion, Polk, and Yamhill counties, Oreg. These eight counties produced 51 per cent of the total crop in 1919, and 57 per cent of the commercial crop. A smaller center may be noted in Clarke County, Wash., and a scattered acreage in the upper Willamette and Umpqua Valleys, Oreg., in the Sacramento Valley and in Fresno County, Calif. Prunes constitute nearly the entire production in these States. The scattered dots in the eastern half of the United States are practically all plums.

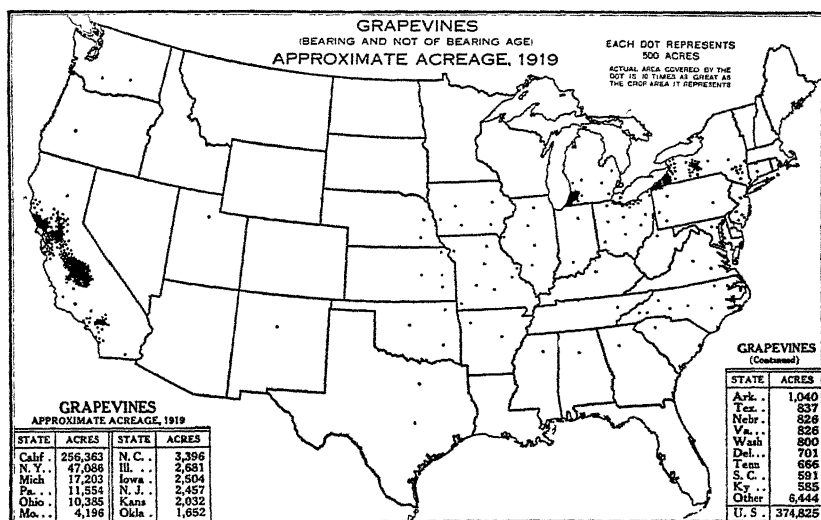


FIG. 67.—Two-thirds of the Nation's acreage of grapes is in California. The raisin district centers around Fresno, where the land is flat and the sunshine almost continuous, while the wine grapes are grown mostly on the slopes of the valleys that open into San Francisco Bay. These wine grapes are now used largely for raisins. A smaller center may be noted in southern California near San Bernardino. In the East the principal grape district extends along the southern shore of Lake Erie from Erie to Buffalo. Minor centers may be seen in the Finger Lakes district of New York, the south shore of Lake Erie in Ohio, and in the southwestern corner of Michigan. These eastern grapes are mostly consumed fresh or made into grape juice.

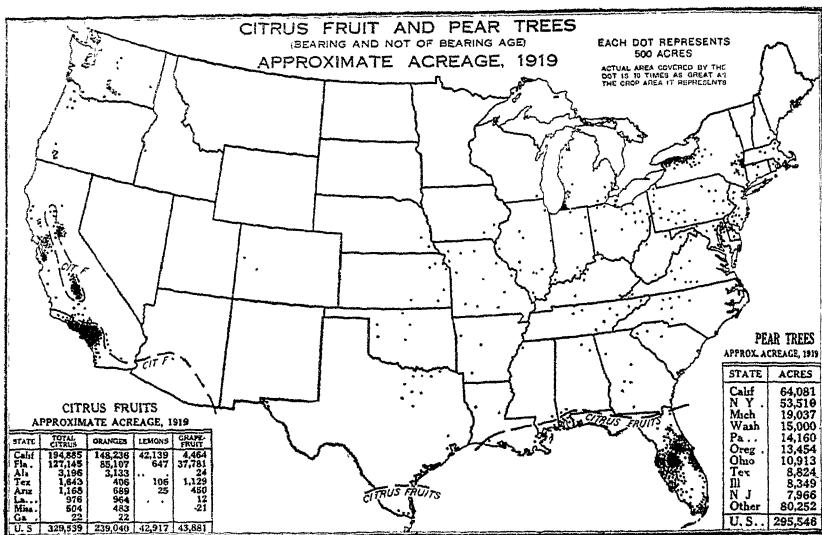


FIG. 68.—Citrus fruits can withstand only a few degrees of frost. About three-fifths of the acreage is in California and nearly two-fifths in Florida. There are a few orchards in the Mississippi Delta in Louisiana, in the Brownsville, Tex., district, and near Phoenix, Ariz., and recently hardy Satsuma orange trees have been planted along the Gulf coast in eastern Texas, southern Mississippi, and Alabama. Lemons are practically confined to California, grapefruit largely to Florida, while oranges are grown in both States.

The principal pear districts are the Ontario shore counties and the Hudson Valley of New York, southwestern Michigan along the lake, the foothills of central and southern California, western Oregon, and the Yakima Valley of Washington.

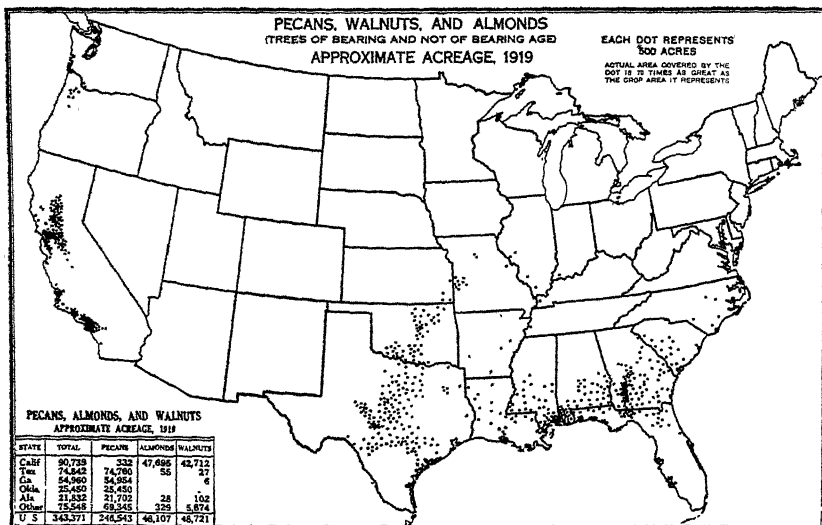


FIG. 69.—Only three kinds of nuts are produced on a commercial scale in the United States—pecans, walnuts, and almonds. The pecan is native to the lower Mississippi Valley, and the largest acreage is found in a belt which extends from central Missouri across Oklahoma to south-central Texas. Recently extensive planting of pecan trees has taken place on the coastal plain in Georgia, the Carolinas, Alabama, Mississippi, and northern Florida. Almonds and walnuts have been introduced from the Mediterranean region and their production is practically confined to California, except for a considerable acreage of walnuts in the Willamette Valley of Oregon and adjoining counties in Washington.

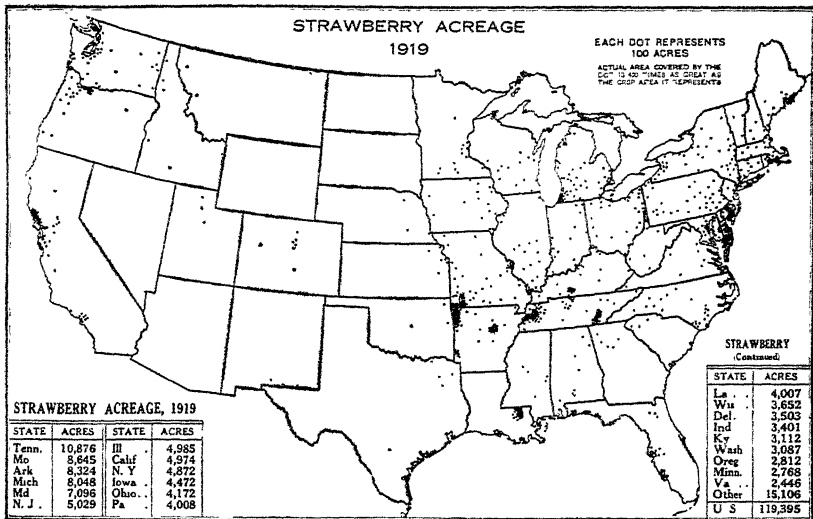


FIG. 70.—The commercial production of strawberries has become concentrated in unusual degree in a few centers, notably, in Cumberland, Camden, Burlington, and Atlantic Counties, N. J.; Sussex County, Del.; Wicomico, Worcester, Caroline, and Anne Arundel Counties, Md.; in Hamilton, Rhea, Crockett, Gibson, Lauderdale, and Madison Counties, Tenn.; in Warren County, Ky.; in Barry, Lawrence, McDonald, and Newton Counties, Mo.; and adjacent counties of Washington and Benton in Arkansas; in White County, Ark.; in Tangipahoa Parish, La.; in Berrien County, Mich.; in Sonoma, Sacramento, and Los Angeles Counties, Calif.; and in Hood River County, Oreg. These 30 counties, out of the 3,000 in the United States, contained one-third of the Nation's acreage of strawberries in 1919.

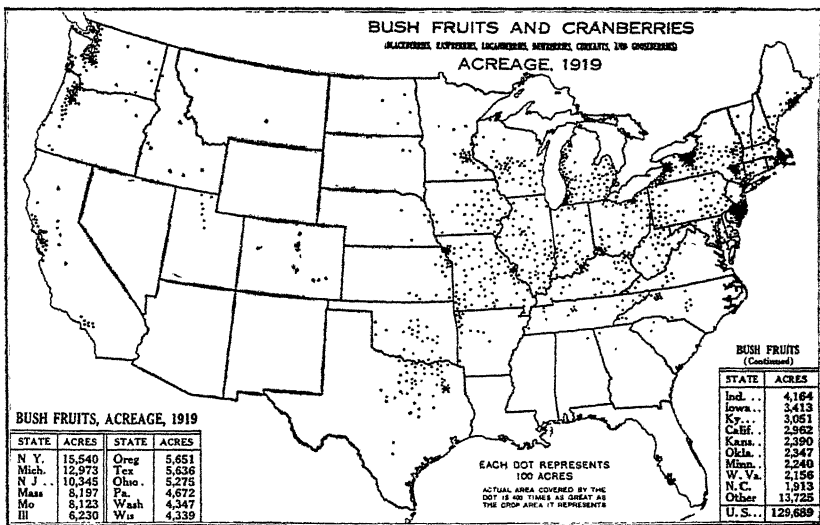


FIG. 71.—The centers of cranberry acreage are Cape Cod Mass., southern New Jersey, and central Wisconsin—all districts of sandy, marshy, acid soils. The centers of bush fruit acreage are southern New Jersey; the Marlboro district in the Hudson Valley of New York; the district east and southeast of Rochester; the belt along Lake Erie from Buffalo to Cleveland; the eastern shore of Lake Michigan, especially Berrien County; the eastern shore of Puget Sound, especially the Puyallup district; and the Willamette Valley in Oregon, especially the district around Salem. This latter district specializes in loganberries grown for canning and bottling. Minor centers may be noted near many of the large cities.

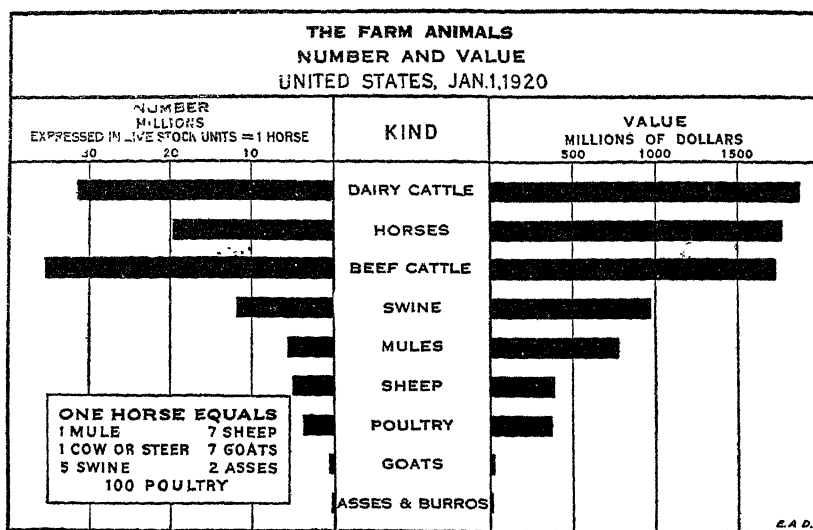


FIG. 72.—Cattle in 1920 constituted the leading class of live stock in the United States on the basis of value. This value was almost equally divided between the dairy and beef types. Between 1910 and 1920 the total value of cattle in the United States increased 143 per cent, due mostly to an increase in value per head of 125 per cent; whereas the value of all horses decreased 14 per cent, due to exactly the same decrease in value per head. Cattle constituted 46 per cent of the value of all farm animals, horses and mules 32 per cent, swine 12 per cent, sheep and goats 5 per cent, and poultry nearly 5 per cent. The swine, however, produce annually pork and lard having a value greater than that of the beef and veal from the cattle.

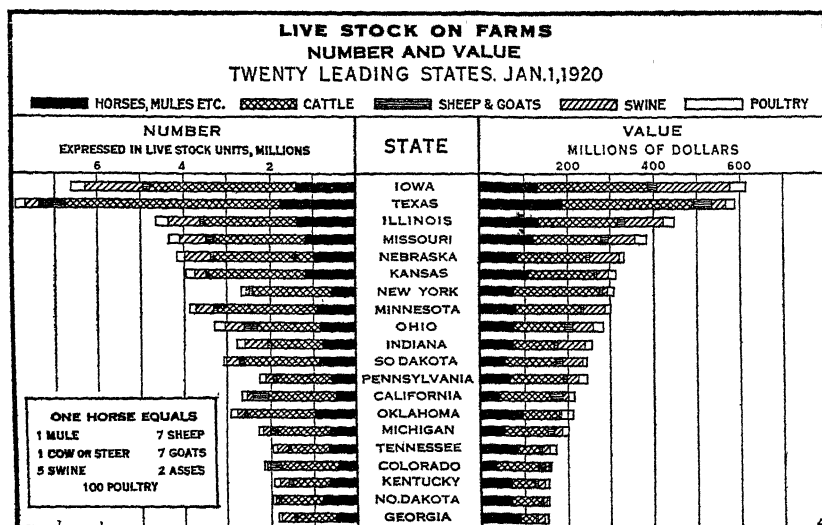


FIG. 73.—Iowa leads the States in value of live stock on farms, but is exceeded by Texas in number of animal units. It is noteworthy that 9 of the 11 leading States in value of live stock are located wholly or partly in the Corn Belt. On the other hand, Georgia is the only State lying almost wholly in the Cotton Belt that is included in this list of 20 leading live-stock States. The concentration of live stock in the Corn Belt, and in the dairying centers of the Hay and Pasture Region is shown in Figure 107. Cattle and horses and mules, it will be noted, constitute in the different States from six-tenths to nine-tenths of the value of all live stock.

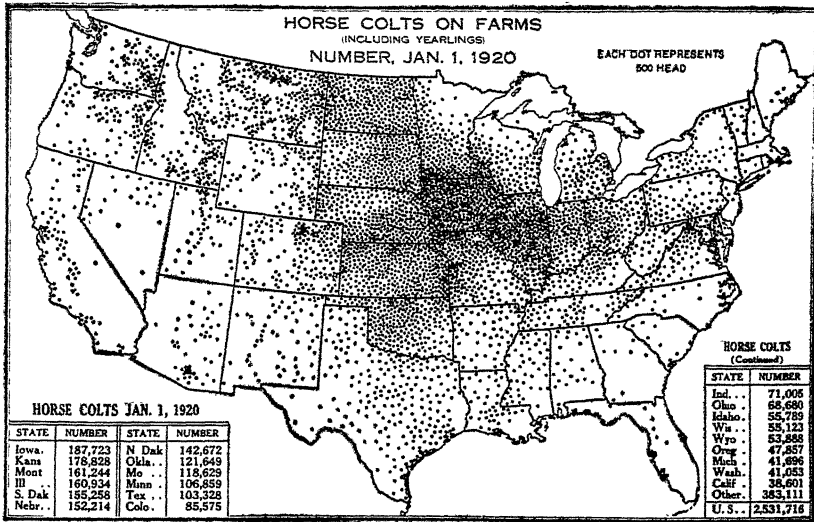


FIG. 74.—One-third of the horses in the United States are raised in the Corn Belt, one-sixth in the Great Plains Region, one-tenth in the Spring Wheat Area, and one-twelfth in the Kansas-Oklahoma section of the Corn and Winter Wheat Region. These are the regions of surplus grain and cheap forage. Comparatively few horses are raised in the Cotton Belt, or the Central and North Atlantic States, because these are regions of deficient grain production and feed must be shipped in at heavy expense. It is more economical to ship the mature horses into these deficiency regions than to ship the grain to grow them. (See Figs. 11, 12, 27, 32, 33, 36, and 41.)

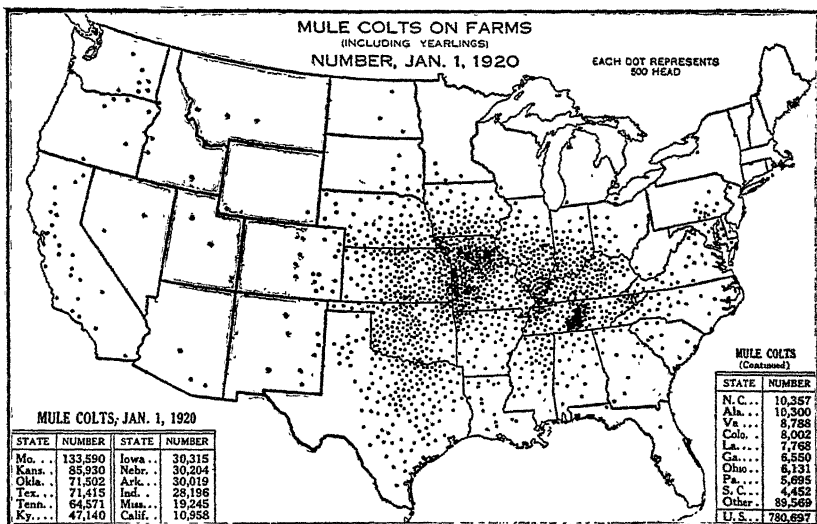


FIG. 75.—Two-thirds of the mules are raised in the western section of the Corn and Winter Wheat Region and the southern portion of the Corn Belt, the centers of production being about 300 miles south of the centers of horse production. This may be due in part to the adaptation of the mule to warmer temperature than the horse, but also in part to the shorter distance and smaller cost of transportation to the Cotton Belt, where most of the mules are sent (see Fig. 77). Formerly Kentucky and Tennessee were the leading States in mule production, but now a much greater number are raised in Missouri, Kansas, and Oklahoma, where feed is cheaper.

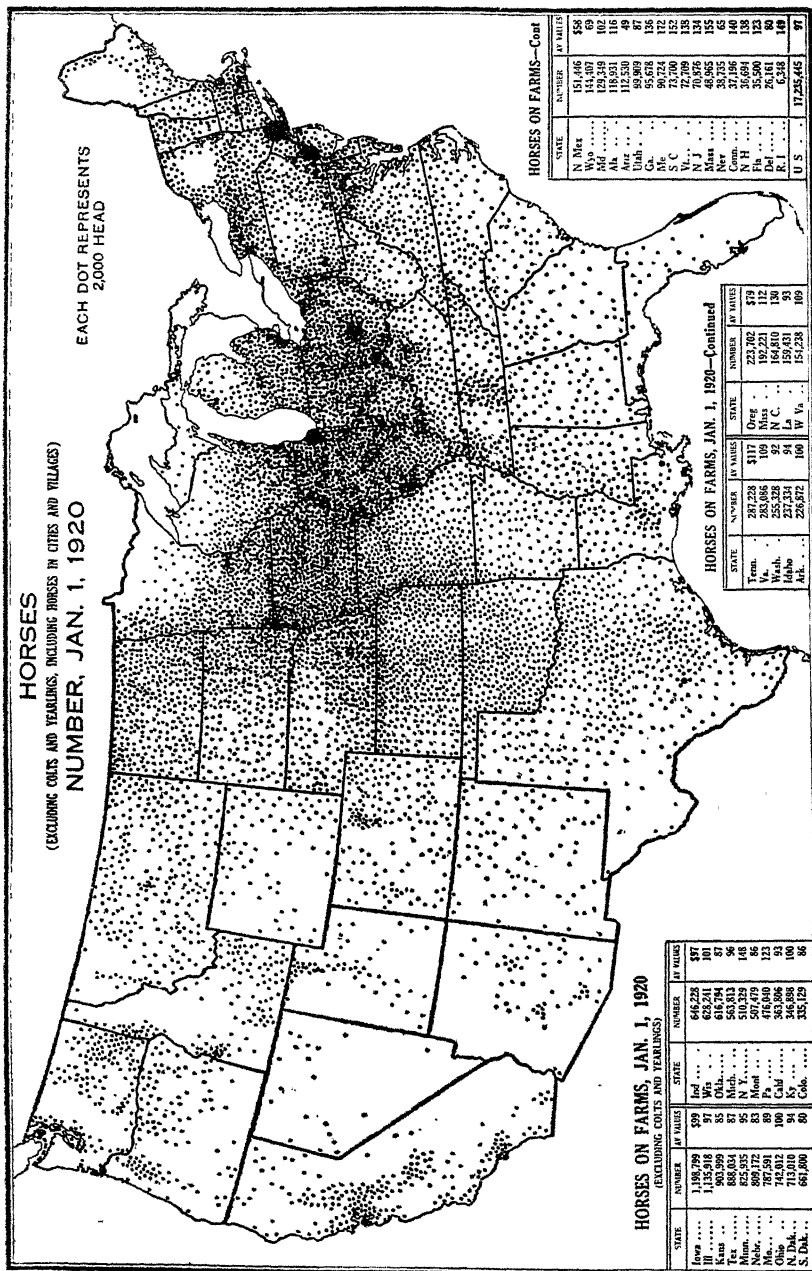


FIG. 76.—Over one-quarter of the mature horses (2 years old and over) in the United States are in the Corn Belt, and over three-quarters are in the humid eastern half of the country. The small number of horses in the Cotton Belt and the eastern sections of the Corn and Winter Wheat Region is owing in large measure to the preference for mules as work animals in these regions (see Fig. 77). The acres of crops per mature horse and mule in the Cotton Belt (17 acres) is practically the same as in the Corn Belt (18 acres), or in the Hay and Pasture Region (16 acres). The number of horses in cities and villages ("not on farms or ranges") was 1,705,611 on January 1, 1920, or about one-tenth the number of mature horses on farms.

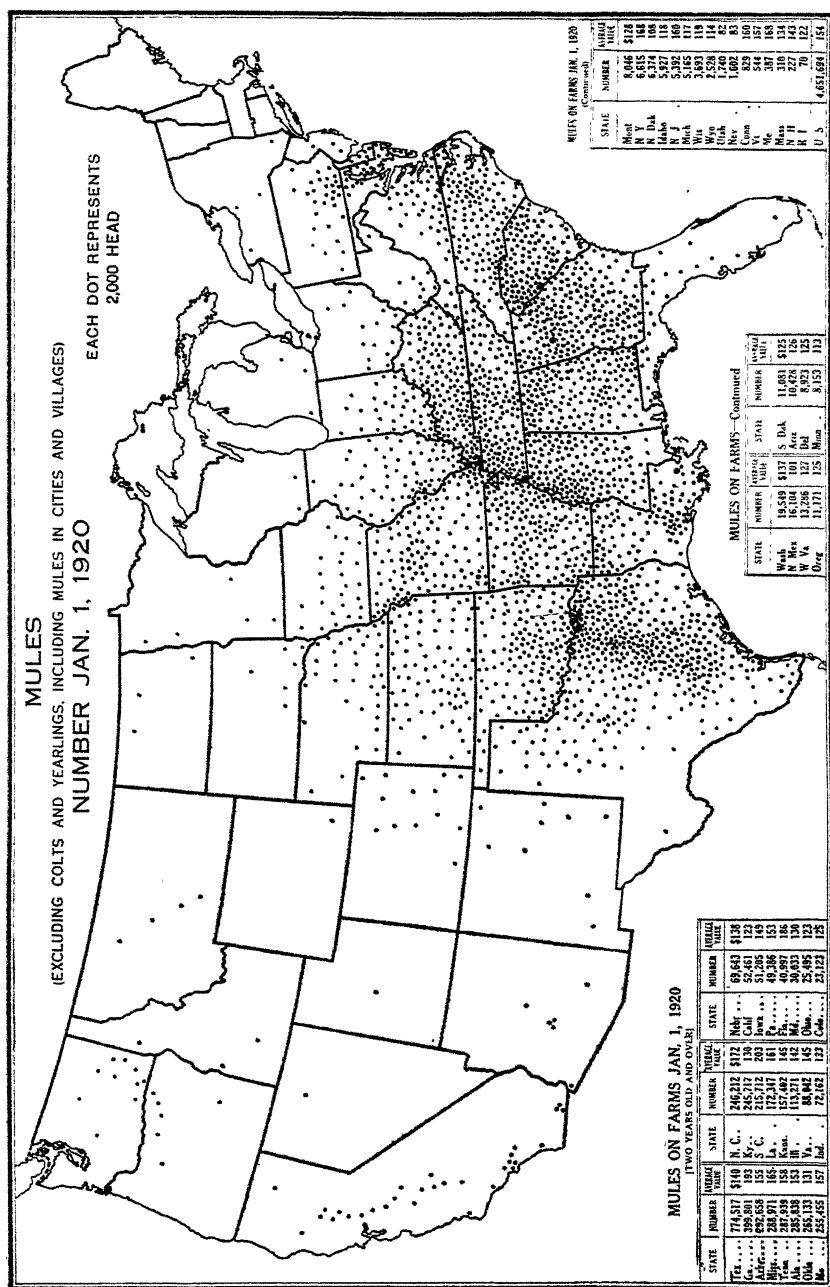


FIG. 77.—About five-sixths of the mature mules (2 years old and over) in the United States are in the Cotton Belt and the Corn and Winter Wheat Region. In the eastern Cotton Belt (east of Texas and Louisiana), where negro farmers are most numerous (see Figs. 116 and 117), there are twice as many mature mules as horses. The popularity of mules is also increasing in the North and West. Whereas the number of horses over 1 year of age on farms in the United States was only 6 per cent greater in 1920 than in 1910, the number of mules increased 33 per cent. This rate of increase was almost as great in the North as in the South. Mules, it will be noted, are used on farms in every State of the Union.

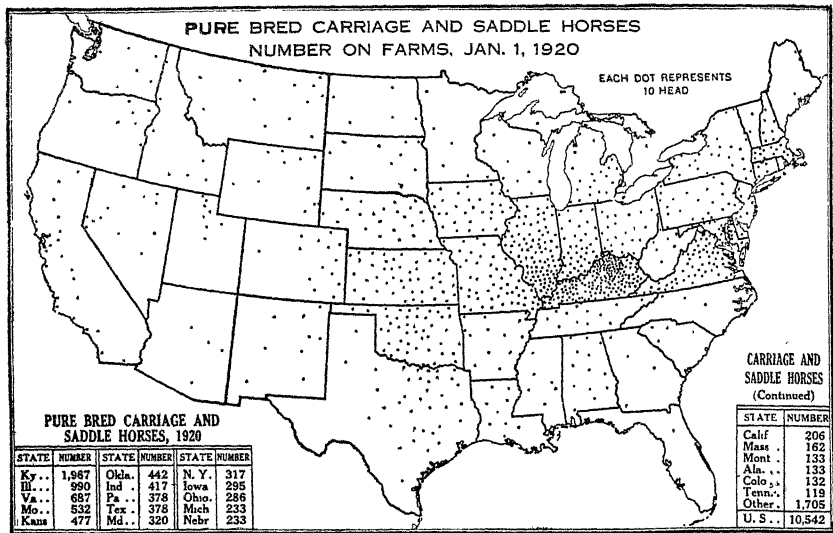


FIG. 78.—The number of pure-bred horses of saddle and carriage breeds in the United States was only about one-ninth the number of those of draft breeds in 1920. The relatively large number of these saddle and carriage horses in Kentucky and adjacent portions of Illinois and Indiana, also in Virginia and Maryland, is noteworthy. These are areas famous in song and story for their fine horses, and despite the decline of horse racing as a sport, and the decreased use of horses for riding and driving, breeders and horse fanciers in these States retain a large number of pure-bred saddle and carriage horses. Probably only a small number, however, are used for breeding.

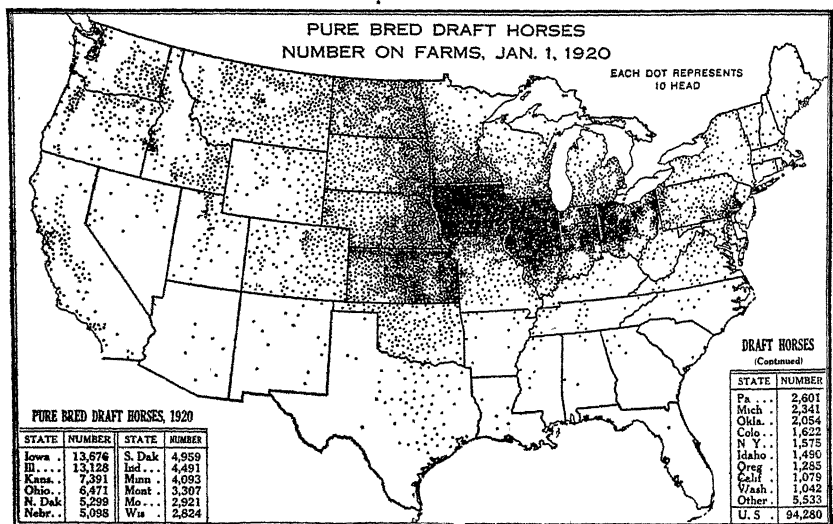
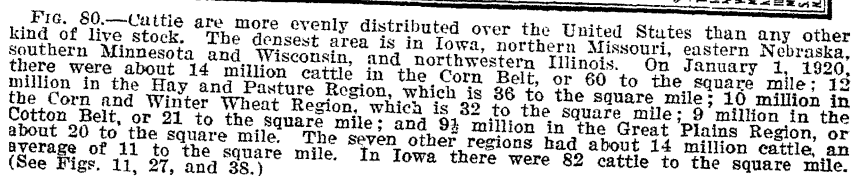


FIG. 79.—About half the pure-bred draft horses in the United States are in the Corn Belt, and most of the other half are in the Hay and Pasture, Spring Wheat, and Great Plains Regions. Very few are found in the South or Southwest. In California, Oregon, Washington, and Idaho, however, pure-bred draft horses relative to the total number of horses are almost as common as in the Corn Belt. Three-fourths of the pure-bred draft horses in the United States are Percherons, 10 per cent are Belgians, 5 per cent are Shires, and 4 per cent are Clydesdales, other breeds constituting the remainder.



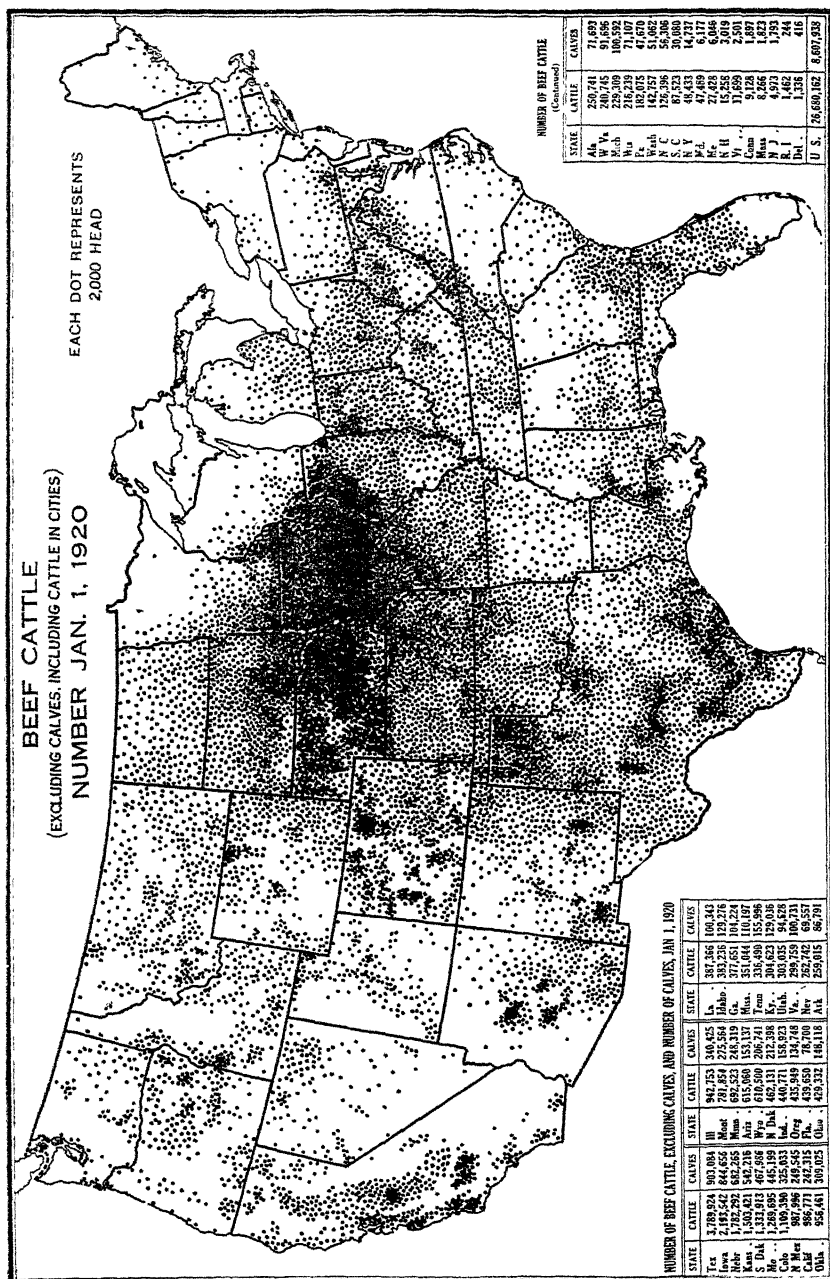


FIG. 81.—Beef cattle constitute slightly over half the total number of cattle in the United States, but slightly less than half the value. Over 8 million beef cattle (including calves) are in the Corn Belt, and as many more in the Great Plains Region, these two regions having nearly half the beef cattle in the country. A large number of beef cattle will also be noted in the Subtropical Coast and southern portion of the Cotton Belt, in the Appalachian valleys, in eastern Kansas, in the mountain parks and valleys of Colorado, Utah, and Idaho, on the plateaus of southwestern New Mexico and south-eastern Arizona, and in California. Over 40 per cent of the beef cattle are in the western half of the United States. (See Figs. 12, 27, and 42.) The corner table figures figures of beef cattle and of calves on farms only; there were 890,963 in cities and villages.

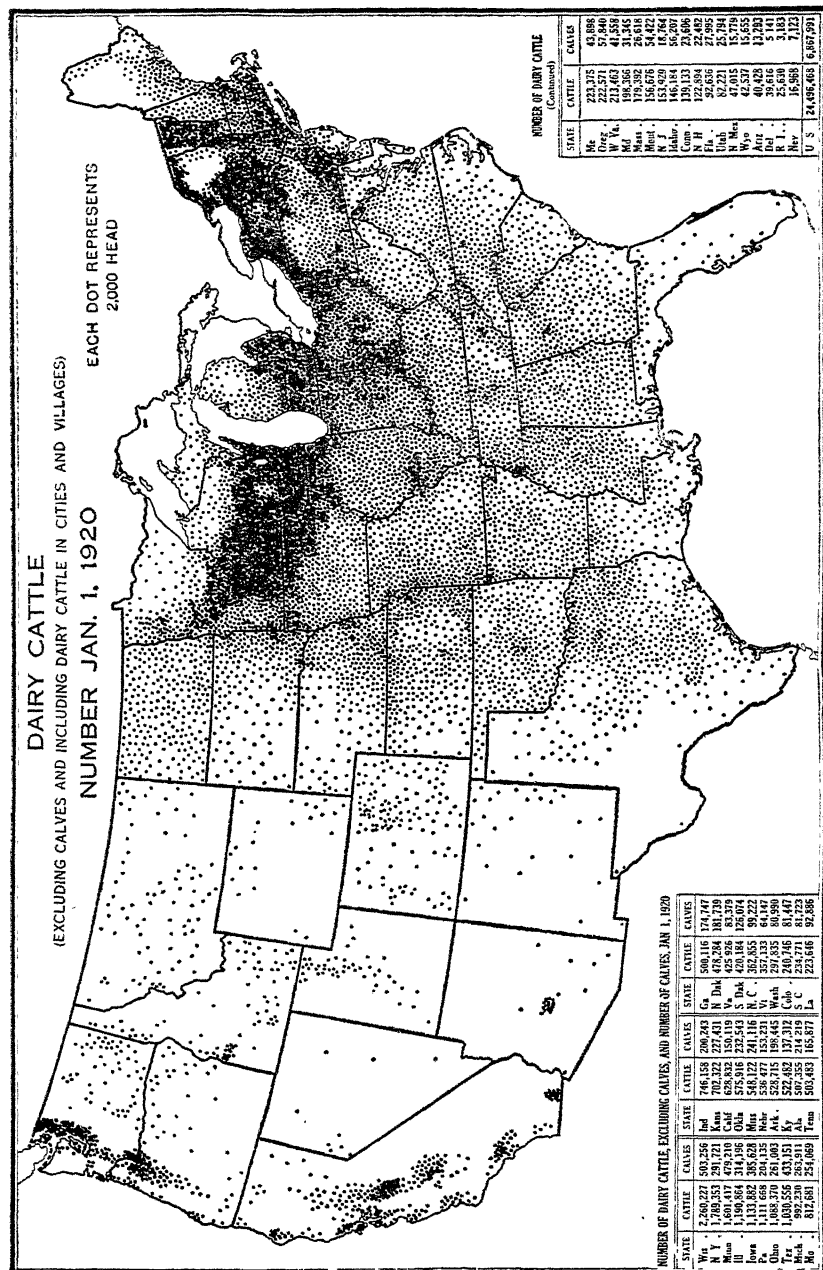


FIG. 82.—Nearly half the dairy cattle in the United States are in the Hay and Pasture Region and the adjacent northern and eastern margin of the Corn Belt. Other dense areas will be noted in southeastern Pennsylvania, which is really Corn Belt country, and in the valleys of the North and South Pacific regions. In the Cotton Belt, especially the northern portion, dairy cattle are more numerous than beef cattle, but in the Great Plains, Rocky Mountain, and Arid Intermountain Regions they are much less numerous. The numbers of dairy cattle are also less in the West than in the East. Cities and villages ("not on farms and ranges", number 1,220,564, which is less than 4 per cent of all dairy cattle and calves in the United States). (See Figs. 25, 40, and 85.)

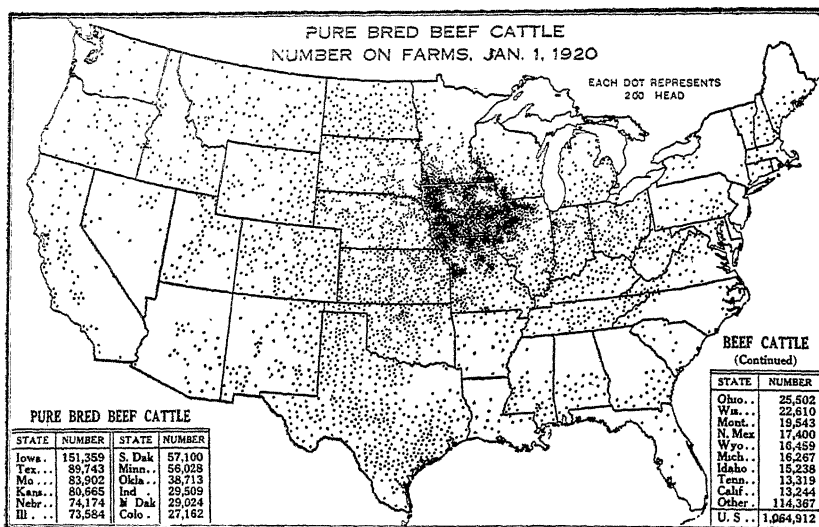


FIG. 83.—The number of registered pure-bred beef cattle is more concentrated geographically than that of all beef cattle. Iowa alone has one-seventh of the entire number in the United States. Five per cent of the beef cattle in Iowa are registered. The prairie and plains portion of the United States (see "tall grass" and "short grass" of Fig. 7) has nearly four-fifths of the pure-bred beef cattle in the country. About two-fifths of the registered beef cattle are Shorthorns—nearly one-half if Polled Durham be included—and nearly two-fifths more are Herefords. Aberdeen-Angus constitute about one-tenth of the total number. Iowa leads the States by a wide margin in number of Shorthorns and Aberdeen-Angus, while Texas leads in number of Herefords.

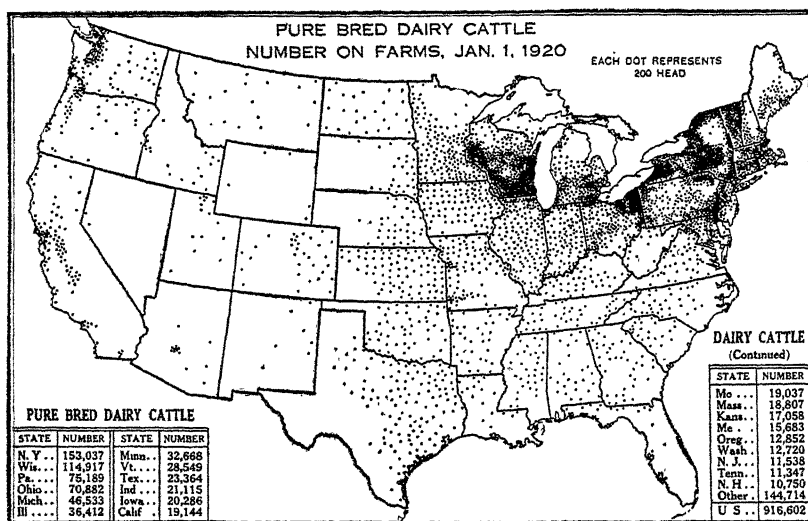


FIG. 84.—Sixty per cent of the registered pure-bred dairy cattle are concentrated in the Hay and Pasture Region. About 5 per cent of the dairy cattle in this region are registered. New York has one-sixth of the registered dairy cattle in the United States, and Wisconsin has one-eighth. Much smaller numbers may be noted in the valleys of California and of western Oregon and Washington. About 58 per cent of the registered dairy cattle in the United States are Holstein-Friesians, 25 per cent are Jerseys, 9 per cent are Guernseys, 3 per cent are Ayrshires, and 1 per cent Brown Swiss, the remainder being unspecified.

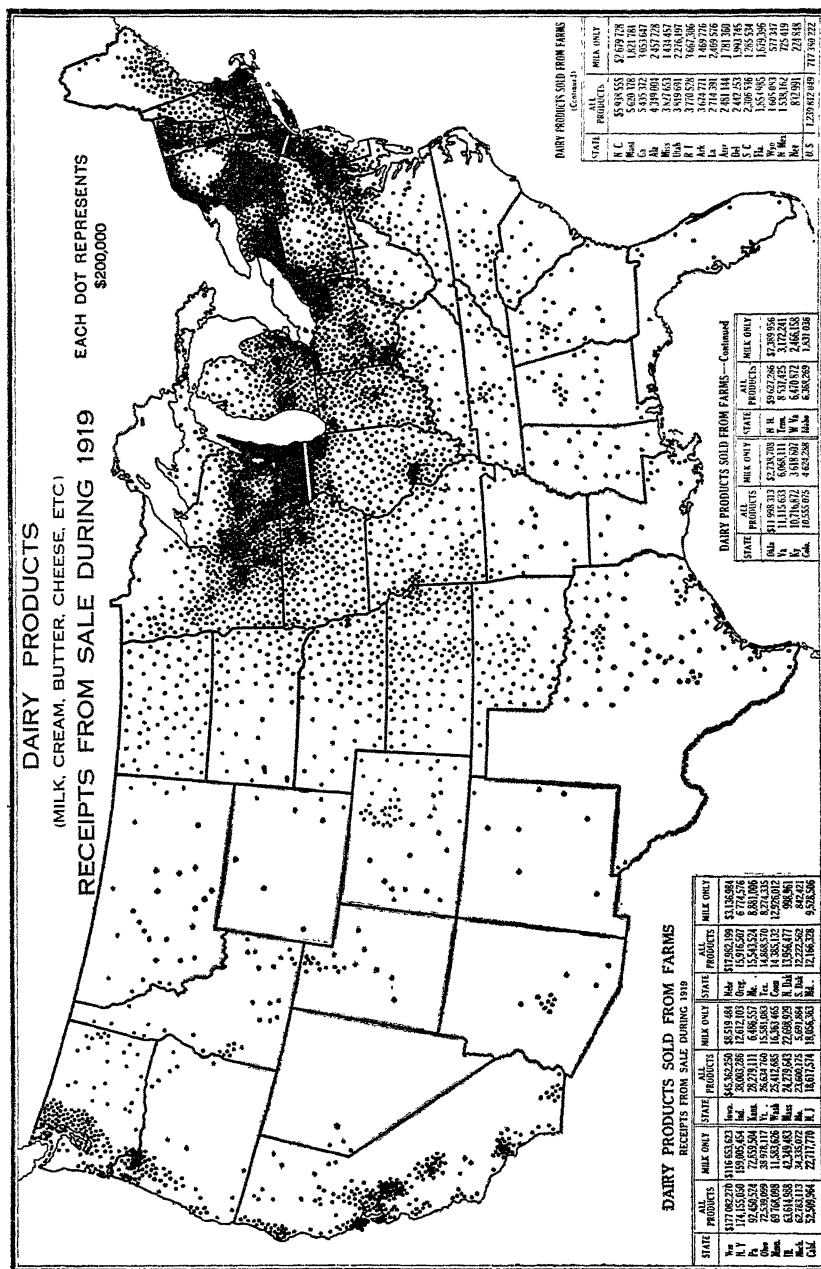


FIG. 85.—This map shows the commercial dairying districts. The concentration in the Hay and Pasture Region is much greater than that of dairy cattle (Fig. 82). Commercial dairy centers may also be noted near the large cities outside this region, notably Philadelphia, Baltimore, Washington, Cincinnati, Indianapolis, St. Louis, Kansas City, Los Angeles, and San Francisco. These, as also the centers adjoining New York City, Boston, Buffalo, Cleveland, and Detroit, represent market milk mostly; while the larger districts in central and northern New York, in Wisconsin, and in Minnesota represent milk and butter fat sold to creameries and cheese factories largely (see Figs. 86, 87, and 88). The value of dairy products consumed on the farm is estimated by the census at about \$240,000,000.

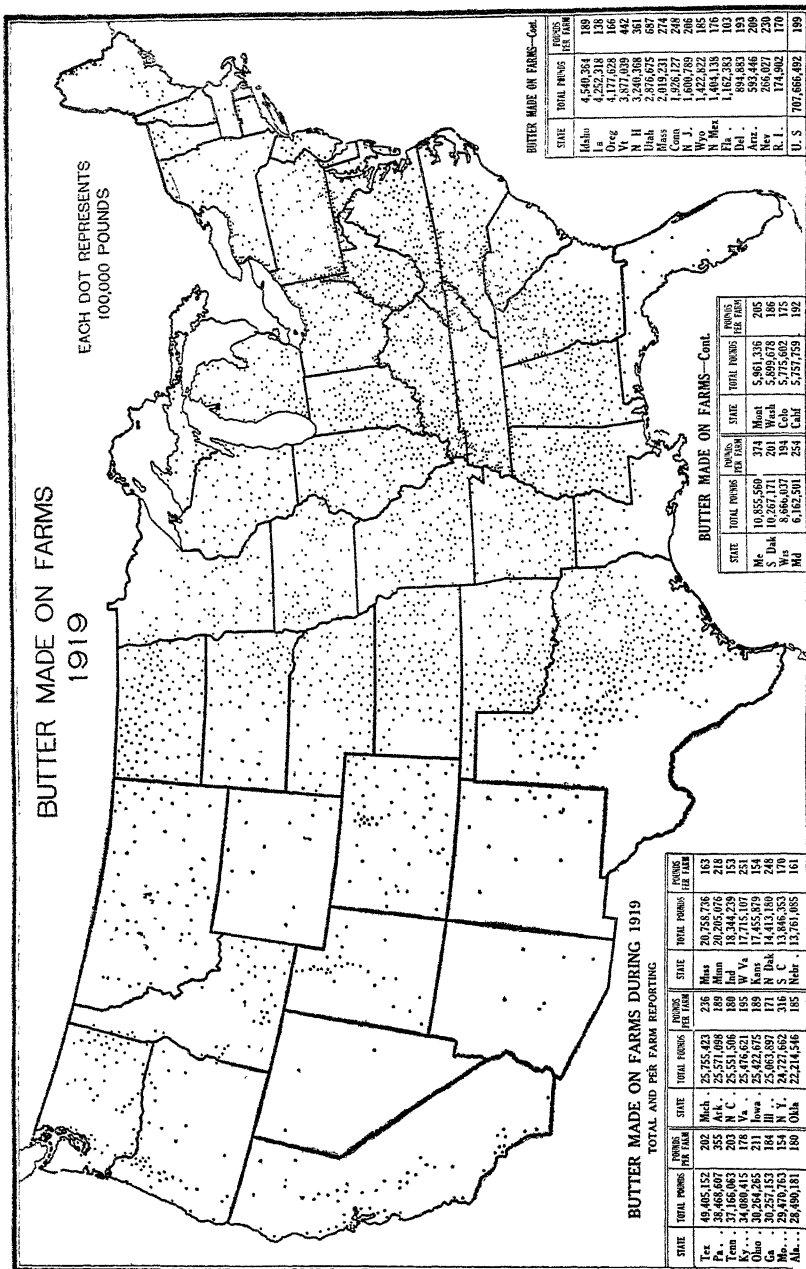
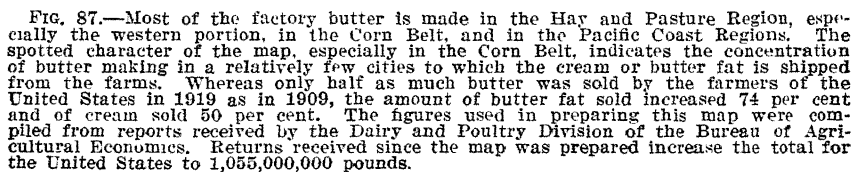


FIG. 86.—Butter made on farms in 1919 constituted 43 per cent of the total production of 1,646,171,874 pounds reported by the census. The areas of densest production of farm butter, it will be noted, are the Piedmont Plateau, extending from eastern Pennsylvania to Alabama; the Tennessee River Valley of northern Alabama and eastern Tennessee; the upper Ohio River basin; the western portion of Kentucky and Tennessee; and the northeastern portion of Texas. It is notable how little butter is made on farms in Wisconsin and Minnesota, where the factory system is well developed. Over half of the farms in the United States made butter in 1919, but less than one-third of the butter made was sold. Most of this farm butter sold was consumed in the locality where it was produced.



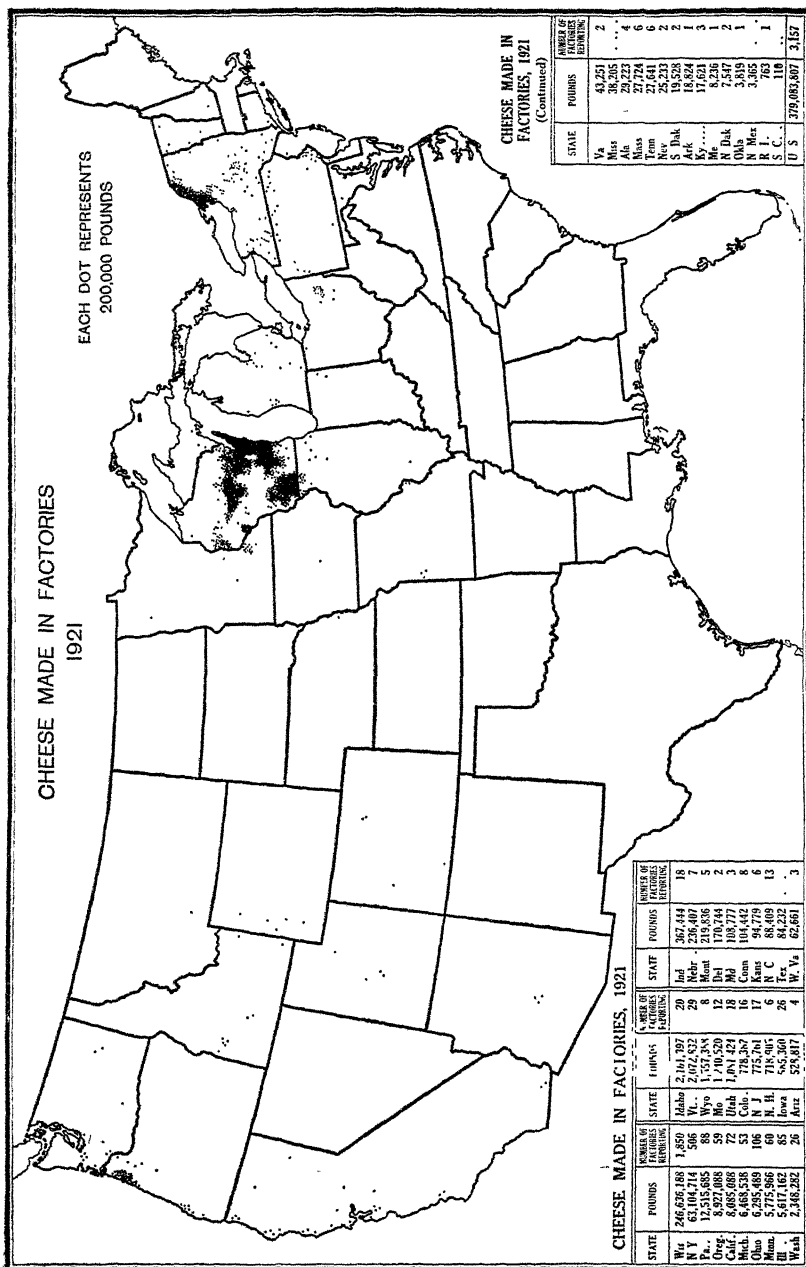


FIG. 88.—Practically all the cheese is now made in factories, only 6,000,000 pounds in 1919, or less than 2 per cent of the total production of the United States, being made on farms. About two-thirds of the cheese is made in Wisconsin and half of the remainder in New York. Cheese production has developed in those parts of Wisconsin and New York having less than 150 days in the growing season, except along the lake shores, and in the central, sandy portion of Wisconsin, which has poor pastures. The dairying, butter making, skim milk, hogs, and corn complete the economic cycle in the warmer belt to the south. The figures were compiled from reports received by the Dairy and Poultry Division, Bureau of Agricultural Economics.

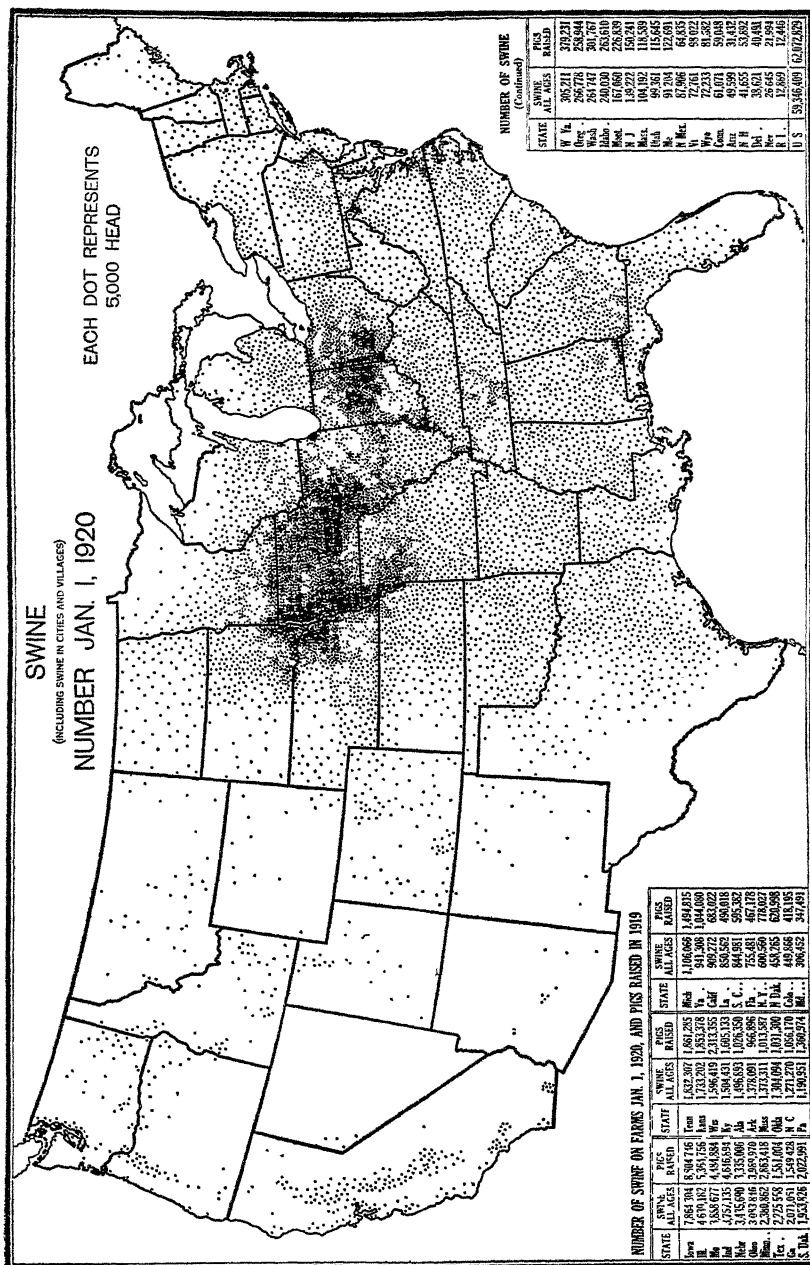


FIG. 89.—Over two-fifths of the hogs and pigs in the United States are in the Corn Belt, nearly one-fifth are in the Cotton Belt, and nearly another fifth in the Corn and Winter Wheat Region. In 1919 there were, on the average, 106 swine per square mile in the Corn Belt, 27 in the Cotton Belt, 32 in the Corn and Winter Wheat Region, 17 in the Hay and Pasture Region, and about 4 per square mile in the remainder of the United States. Just as the cool Hay and Pasture Region finds the best outlet for its crops in feeding dairy cows, so the warm, rich Corn Belt finds the growing of corn and feeding of beef cattle and hogs its most profitable system of farming (see Figs. 27 and 81). Swine in cities and villages numbered 2,638,839, which is about 4 per cent of the total number in the United States.

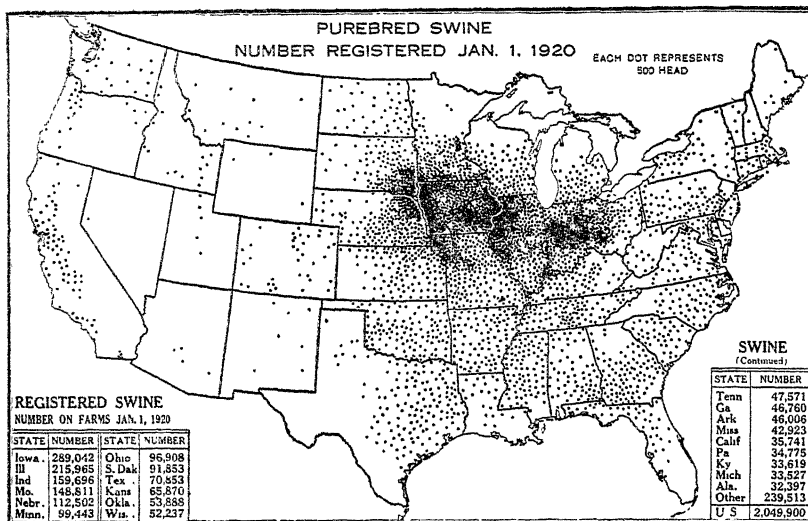


FIG. 90.—Nearly 60 per cent of the registered pure-bred hogs and pigs are in the Corn Belt. About one-seventh, as with pure-bred beef cattle, are in Iowa. Nearly 5 per cent of the swine in the Corn Belt are registered, and 3 per cent in the remainder of the United States. Duroc-Jersey hogs constitute 40 per cent of the registered swine in the United States, Poland-China 35 per cent, Chester-White 9 per cent, Hampshire 5 per cent, Berkshire 4 per cent, other breeds and unspecified 7 per cent. Iowa leads all States in number of pure-bred Duroc-Jersey, Poland-China, Chester-White, Hampshire and Tamworth; Indiana in number of spotted Poland-China; Pennsylvania in Berkshires; Kansas in Essex; and Minnesota in Yorkshires.

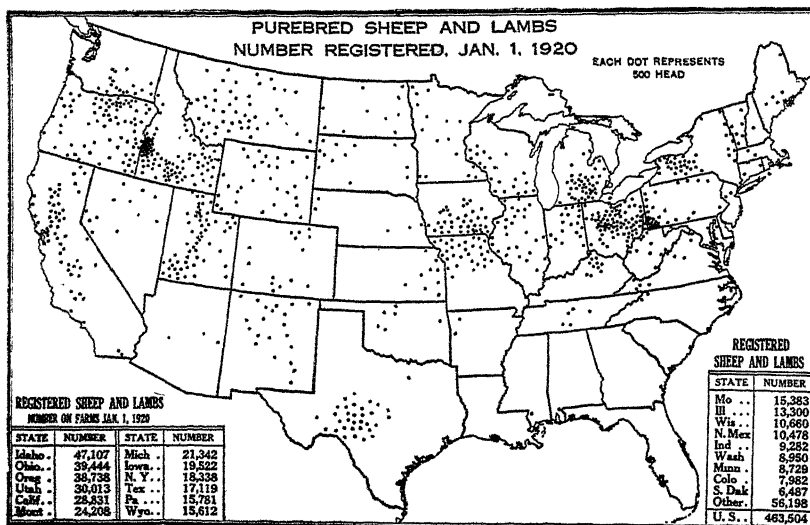
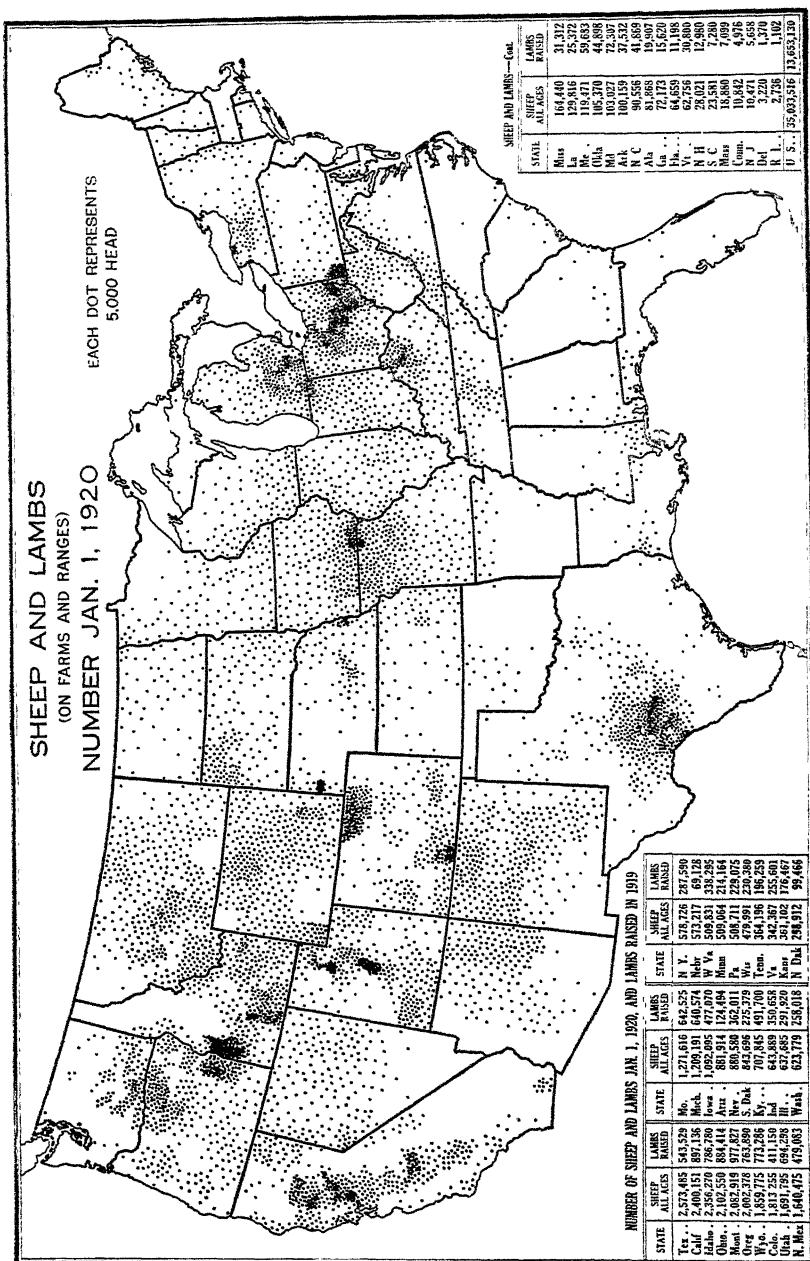


FIG. 91.—Registered pure-bred sheep and lambs are more evenly diffused geographically than pure-bred cattle or swine. A few breeders remain in the old centers of production in Vermont and New York; many more pure-bred sheep may be noted in the more recent production areas of Ohio, southwestern Pennsylvania and southern Michigan; but the greatest number is now found in the West, Idaho leading the States with nearly 50,000 registered animals. Shropshires constitute 27 per cent of all registered sheep in the United States, Rambouillet 23 per cent, Merino 14 per cent, Hampshire 11 per cent, other breeds and unspecified 25 per cent. The Cotton Belt is the only region in which there are practically no pure-bred sheep.



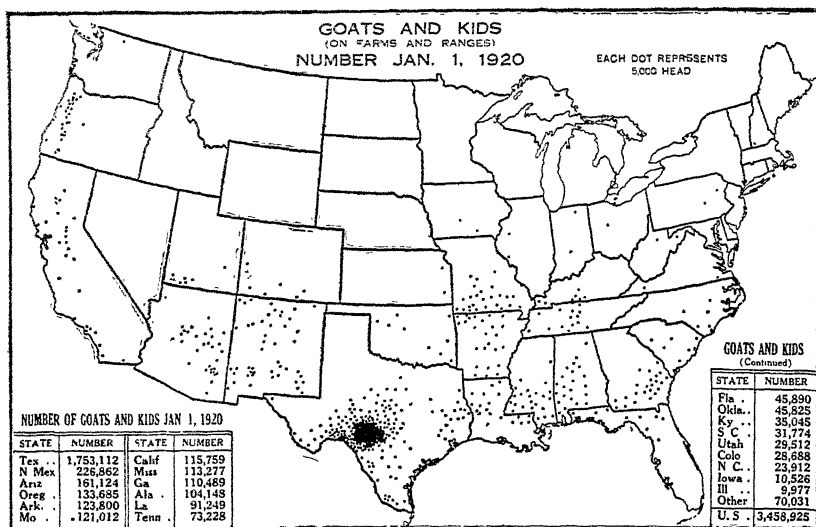


FIG. 93.—Over half of the goats in the United States are in Texas—nearly all on the Edwards Plateau. Cattle, sheep, and goats (see Figs. 81 and 92) are grazed on the same land in this district, the cattle pasturing on the grass, the goats browsing the oak scrub and other brush, retarding its advance upon the grass land, while the sheep eat the weeds as well as the grass and brush. In the South and in western Oregon the goats are used in large numbers in clearing up cut-over land. In Texas and Oregon the goats are mostly Angoras, in Arizona and New Mexico Angoras predominate, but other breeds are common, while in the South practically none of the goats are raised for their fleece.

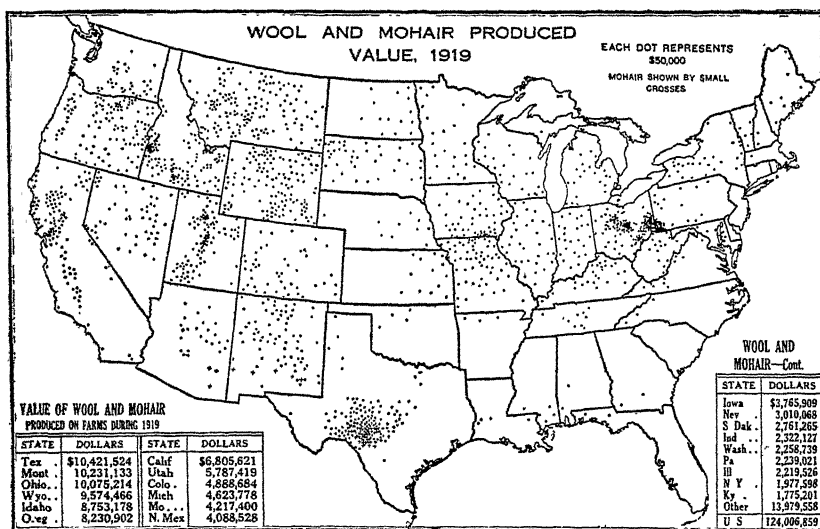


FIG. 94.—The farm value of the wool produced in the United States in 1919 was about 120 million dollars, and of the mohair about three and a half million. Texas led the States in value of wool and mohair produced, but as the value of the mohair amounted to \$2,673,275, the value of the wool produced in Texas was less than in Montana, Ohio, Wyoming, Idaho, or Oregon. The average value of the wool produced in 1919 per mature sheep January 1, 1920, was \$6.43 in Ohio, \$6.50 in Montana, \$5.53 in Oregon, and about \$4 in Texas; while the value of mohair in Texas per mature goat raised for the fleece was \$2.40. The price of wool in 1919 was about three times the pre-war price.

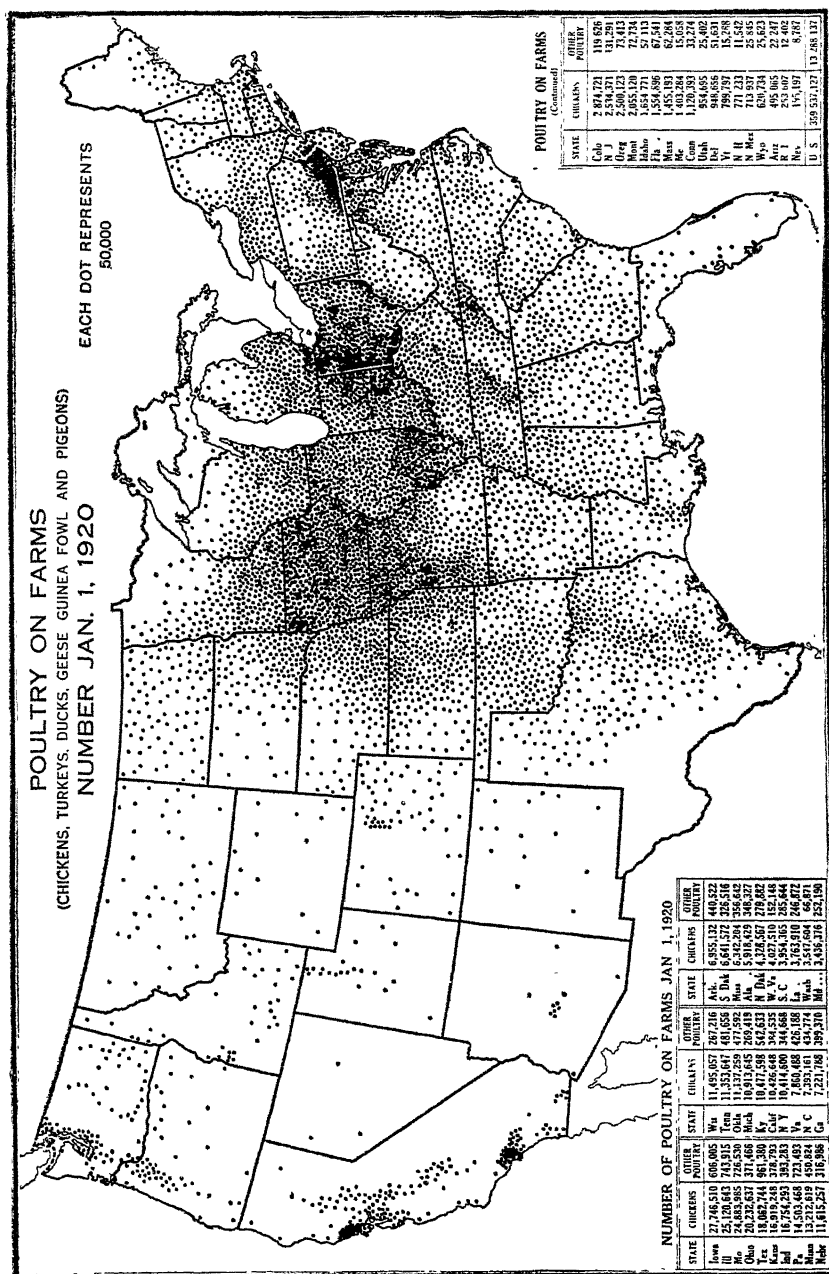


FIG. 95.—Half of the poultry in the United States are in the Corn Belt and around its margin, where feed is cheap. But the two most notable districts of production are the counties in southeastern Pennsylvania, near Philadelphia, and Sonoma County, Calif., especially the district around Petaluma. Six counties in southeastern Pennsylvania had nearly 5 million poultry on January 1, 1920, or 4,000 to the square mile; while in Sonoma County there were over 3 million poultry, with sales of eggs and chickens amounting to over 12 million dollars in 1919. Los Angeles County, Calif., had 1,350,000 poultry. The California cities are supplied largely from these two counties; but the eastern cities draw their supplies from a much wider territory.

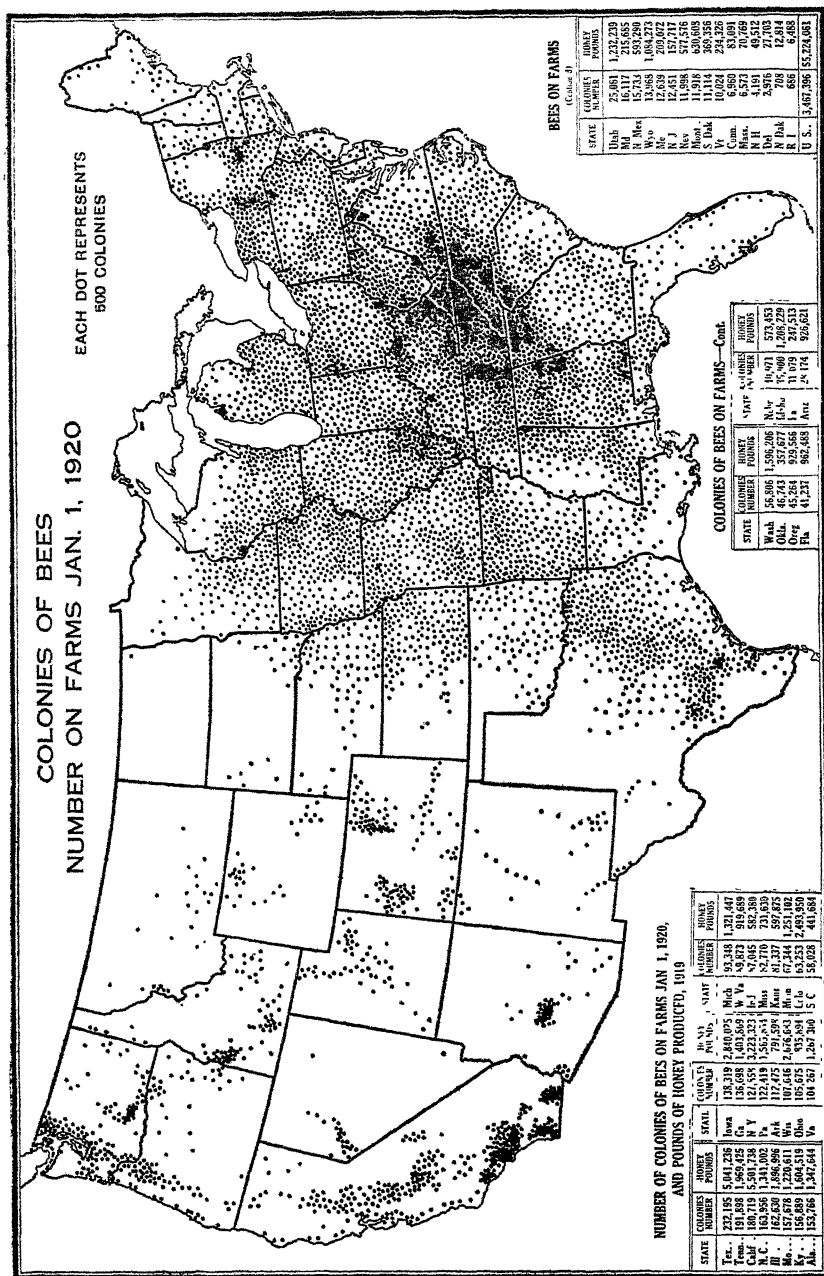


FIG. 96.—Two areas of dense distribution of bees stand out on the map, the southern Appalachians and southern California. The southern Appalachian area, extending from eastern Kentucky to northern Georgia and Alabama, had about 600,000 colonies in 1919 and produced about 7,000,000 pounds of honey; whereas California, with only 181,000 colonies, produced 5,600,000 pounds, or almost three times as much per colony. Texas also produced over 5,000,000 pounds of honey in 1919. The irrigated districts in the West, where fruit and alfalfa furnish many flowers, show distinctly on the map. Districts having large numbers of bees may also be noted in New York State, along the Ohio River, and in southern Illinois.

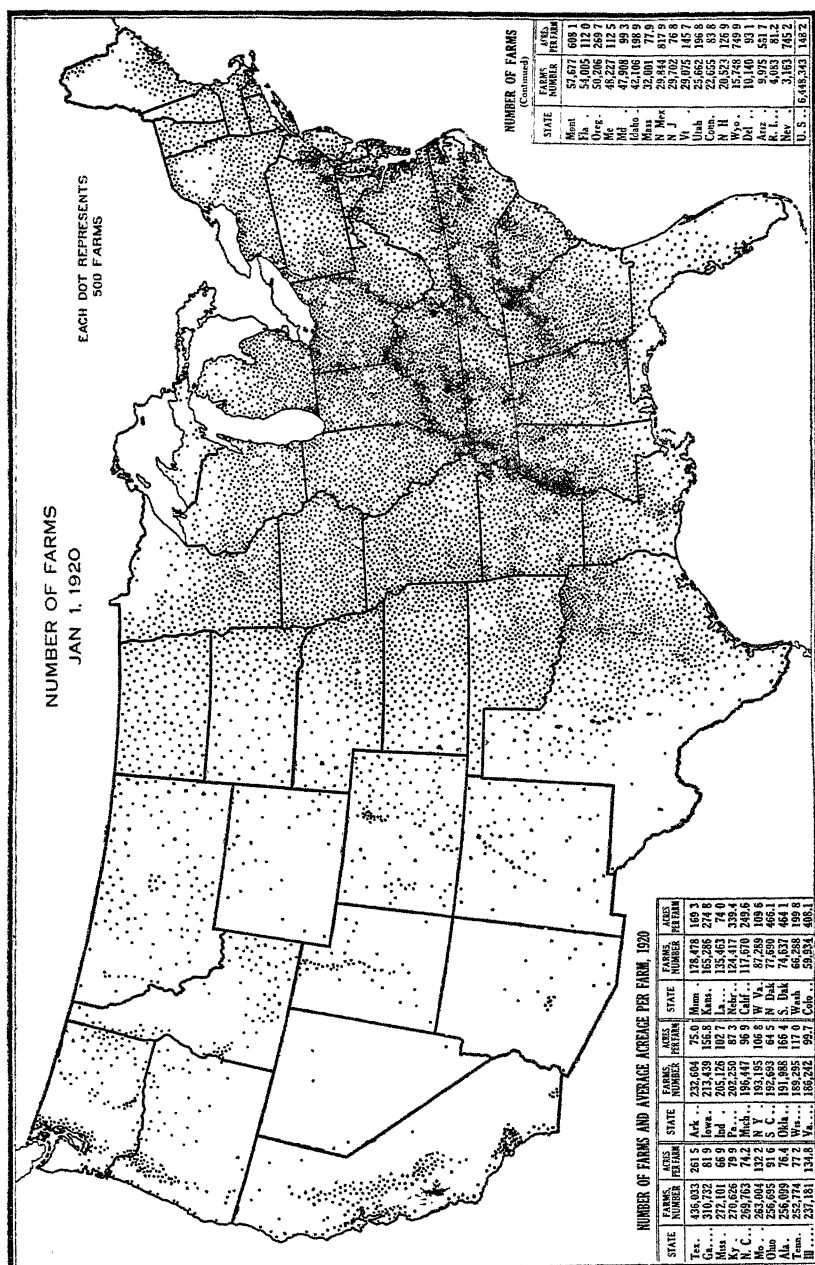
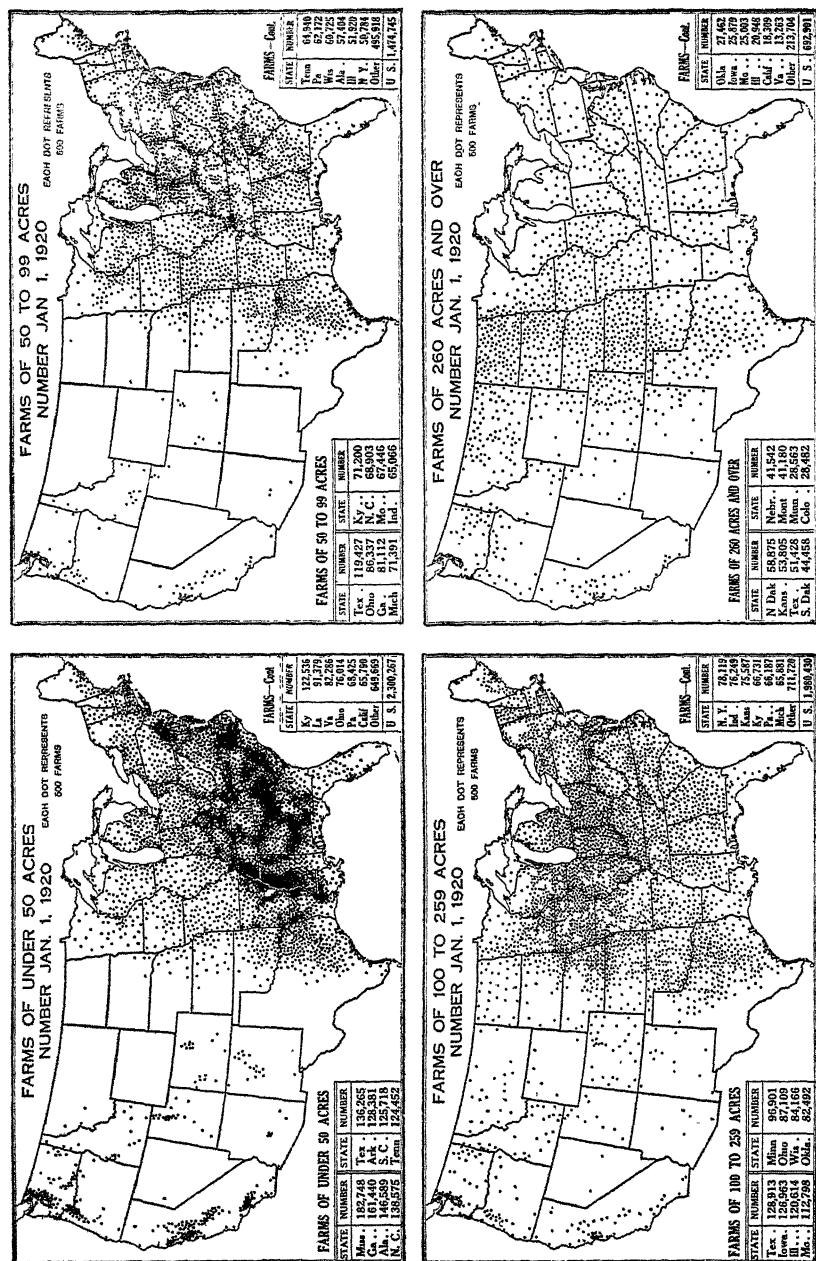


FIG. 97.—This map, showing the distribution of farms, might also serve as a map of farm population. The densest areas are southeastern Pennsylvania, the upper Piedmont of South Carolina and Georgia, eastern, central, and western Tennessee, the Ohio Valley, and the Yazoo Delta in Mississippi. Over half the farms in the United States are in the Cotton Belt and the Corn and Winter Wheat Region. Many of the tenant farms on the plantations in the Cotton Belt, however, are little more than laborers' allotments. The Corn Belt, although it includes over one-third the value of farm property in the United States, has only one-seventh of the farms. Nine-tenths of the farms are in the eastern half of the United States. The relative density of farm population in the South is even greater than that of farms. (See Figs. 104 and 118.)



FIGS. 98 to 101.—The typical negro tenant farms are from 30 to 50 acres in size, of which about half is in cotton. Many white farmers also have small farms, both in the Cotton Belt and in the Corn and Winter Wheat Region. Farms of 50 to 100 acres are characteristic of the white cotton farmers in the upper Piedmont of the Carolinas and Georgia and the Black Prairie of Texas; also of the fair to good soils of Tennessee, Kentucky, Ohio, and Michigan. On the richer lands of the Corn Belt farms of 100 to 260 acres prevail. Large farms in area—over 260 acres—are found in the Great Plains and Spring Wheat regions. A two-section "dry farm" in the Great Plains Region, however, is no larger in productivity than a quarter-section farm in the Corn Belt (see Fig. 103).

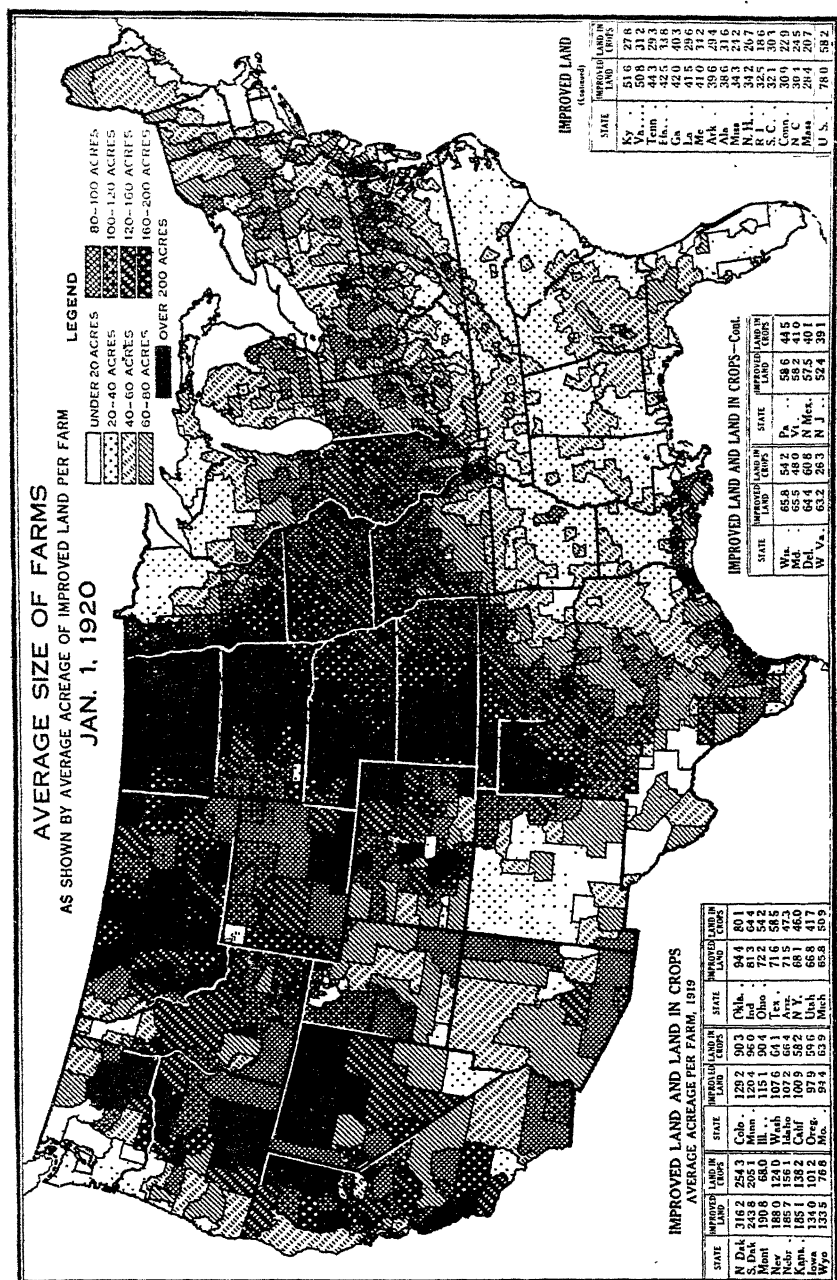


FIG. 102.—Improved land is a better criterion of the real size of a farm than its total area. The Cotton Belt stands out clearly, with the farms in most of the area averaging less than 40 acres. The same small acreage per farm is found in eastern New England, where trucking and dairying dominate, and in the upper Lakes area, where farms are only partially reclaimed from the forest. At the other extreme, much of the Great Plains and most of the Spring Wheat Area average over 200 acres per farm. The sharp gradation zone extending from northwestern Minnesota to Indiana, thence to central Texas, marks the eastern margin of the prairies (see Fig. 7). Prairie farms were more easily and quickly made than forest farms, and have remained larger. (See Fig. 111.)

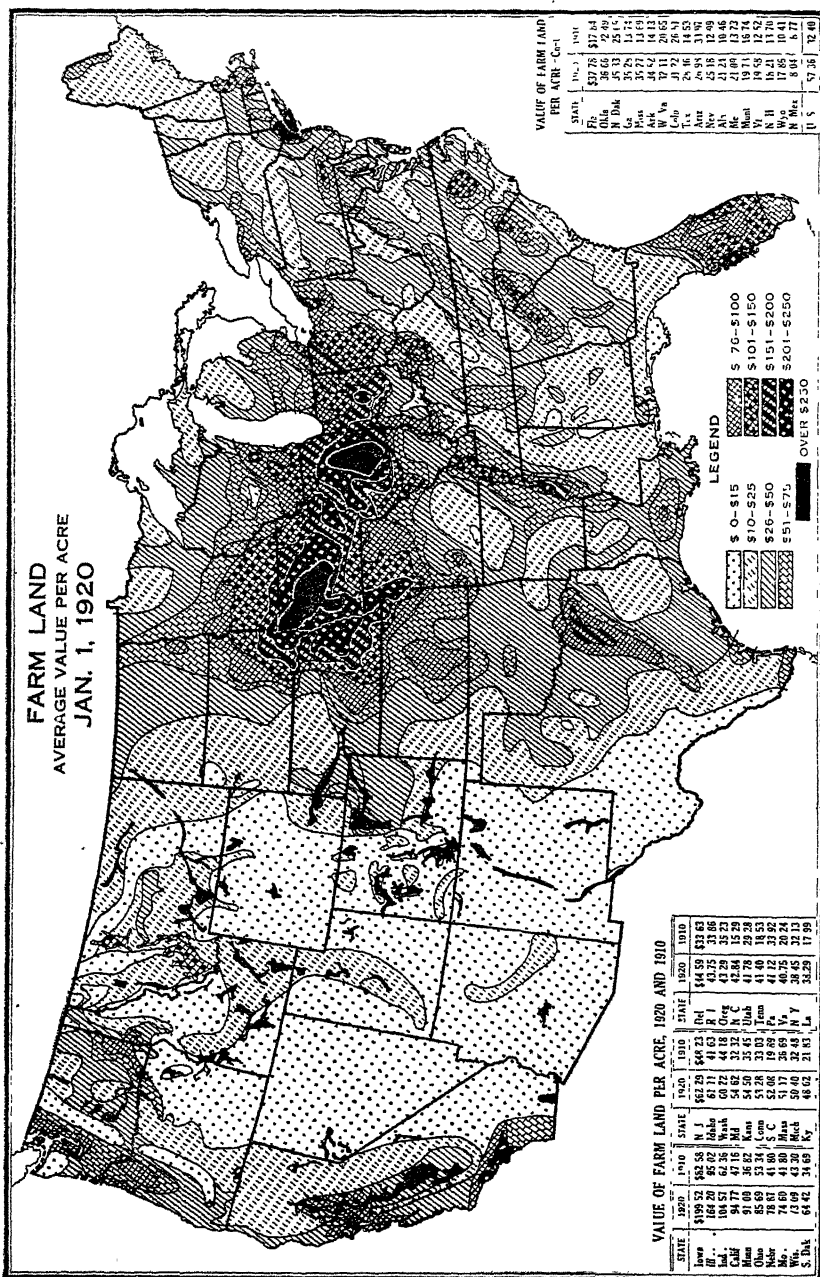


FIG. 103.—The Corn Belt is conspicuous on this map, average land values in central Illinois and northwestern Iowa having risen to over \$250 an acre in 1919. There has been a decline since. The irrigated areas are also shown on the map as having land values of over \$250, but this is not true of all the districts. Even the larger irrigated areas were too small to show other than in black, and many smaller districts could not be shown at all. The regions of low land values are the arid and semiarid lands of the West, the sandy, thin, or stony soils of the upper Lakes area and the North Atlantic States, and the light or leached lands in parts of the South, where also much of the farm may be in forest. The first box in the legend should read \$0-\$10, the second box

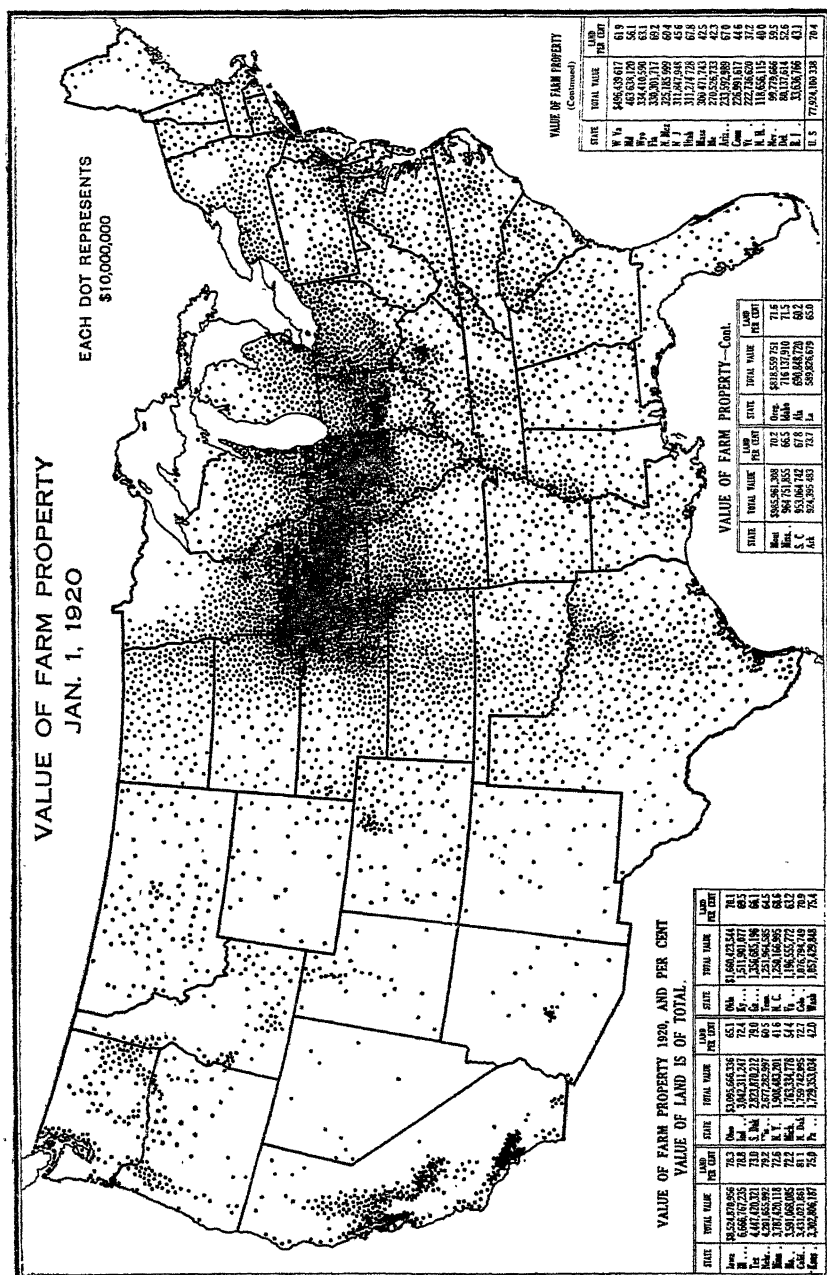


FIG. 104.—Over one-third of the value of farm property in the United States is in the Corn Belt, and nearly two-fifths of the value of farm land. The average value of farm land per acre January 1, 1920, was \$148 in the Corn Belt, as compared with \$40 in the Cotton Belt, \$48 in the Hay and Pasture Region, and \$21 in the Great Plains Region. Only in the South Pacific Coast Region does the value of farm property per square mile and of farm land per acre (\$114) approach the values in the Corn Belt. Note the districts of greater values adjoining New York City, Philadelphia, Detroit, and the Twin Cities, also the Blue Grass district in Kentucky.

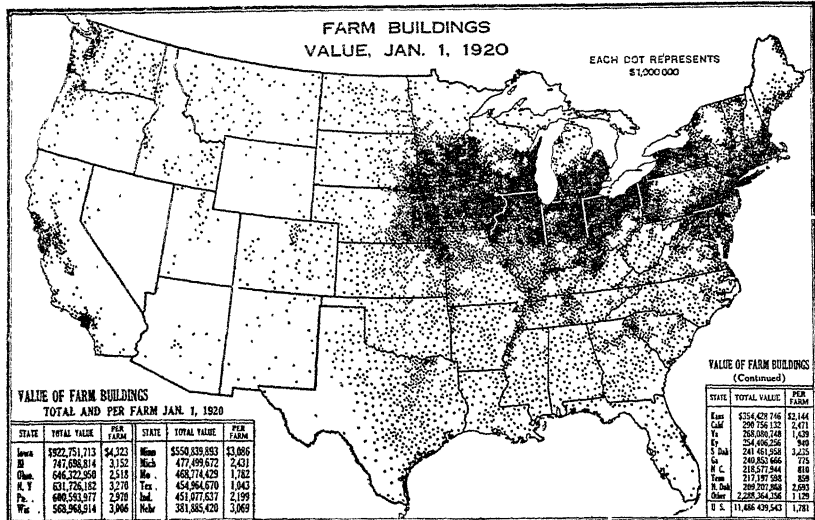


FIG. 105.—The value of farm buildings is greatest in southeastern Pennsylvania, where it exceeds the value of the land, and averages \$4,000 to \$5,000 per farm. In the Corn Belt the average value of farm buildings is \$3,400 per farm, and it is almost as much in the Spring Wheat Area, and the southern portion of the Hay and Pasture Region. In the Cotton Belt, on the other hand, the average value is only \$738, owing in part to the large number of negro shanties. However, the value of the buildings on the landlord's farm in a plantation is almost as great as the values in the Corn Belt. These values of farm buildings include barns and outbuildings, and since the value of the house is, in general, about half that of all farm buildings, the average value of farm houses in the United States is only about \$900.

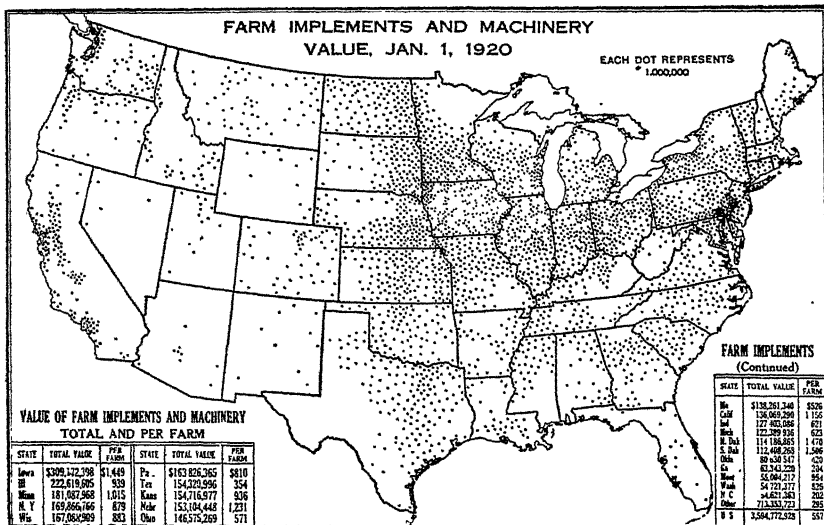


FIG. 106.—About one-half of the value of farm implements and machinery in the United States was reported in 1920 from the Corn Belt and the Hay and Pasture Region; but the greatest value per farm (\$1,370) was in the Spring Wheat Area. In the general farming districts of the North and West the average farm had about \$1,000 worth of machinery in 1920, but the much smaller amount per farm in the Cotton Belt (\$215), and in the Corn and Winter Wheat Region (\$400), reduced the Nation's average to \$557. The proportion which the value of machinery and implements constituted of the total value of farm property was extraordinarily uniform, ranging around 4 to 5 per cent in all the regions, except in the Hay and Pasture Region, where it constituted 7 per cent.

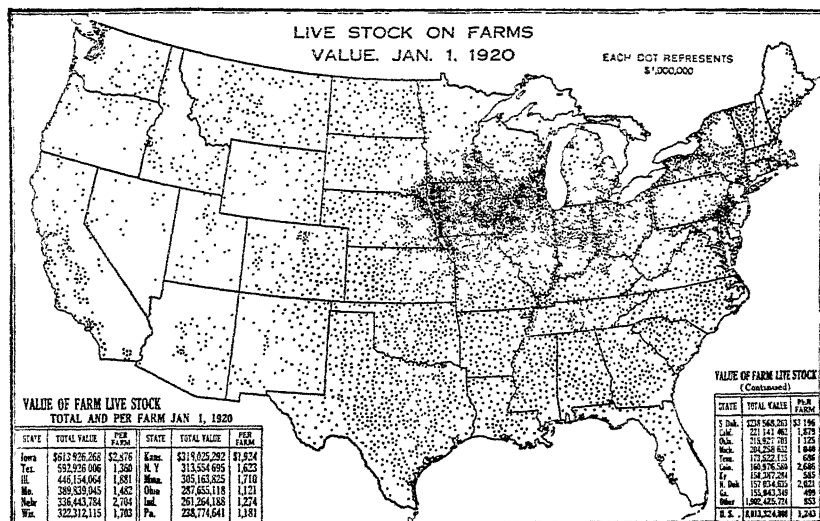


FIG. 107.—The Corn Belt contains one-fourth of the value of all live stock in the United States, or somewhat more than the entire western half of the country. There is also dense distribution in southern Wisconsin and Michigan, in New York, and in south-eastern Pennsylvania, in which districts dairying is very important. The greatest average value per farm, over \$3,000, is in the Arid Intermountain and the Great Plains regions; the smallest, \$583, in the Cotton Belt. However, the proportion which value of live stock constitutes of the total farm investment is 12 per cent in the Cotton Belt, as compared with 8 per cent in the Corn Belt. The greatest proportion, 18 per cent, is found in the Rocky Mountain and Arid Intermountain regions.

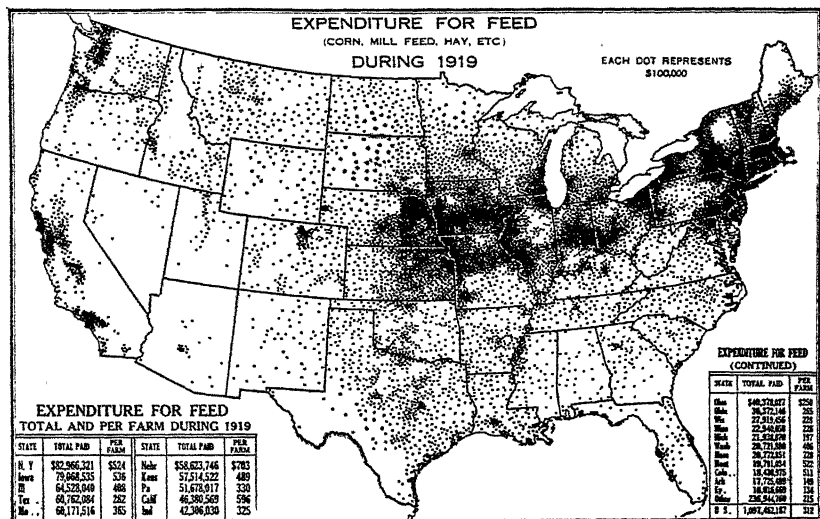


FIG. 108.—The expenditure for feed is greatest in the Hay and Pasture Region, where dairying dominates and the production of grain is deficient, and in the Corn Belt, where feed is freely bought and sold by the farmers, most of whom feed beef cattle and hogs. In north-central Illinois the expenditure for feed is much less because the corn is largely sold to the near-by Chicago market, and few cattle or hogs are raised. (See Figs. 28, 81, 89, and 107.) The heavier expenditure shown in the Puget Sound and Willamette Valleys is largely for feed for dairy cows, while in California the feed is bought principally for dairy cows and poultry.

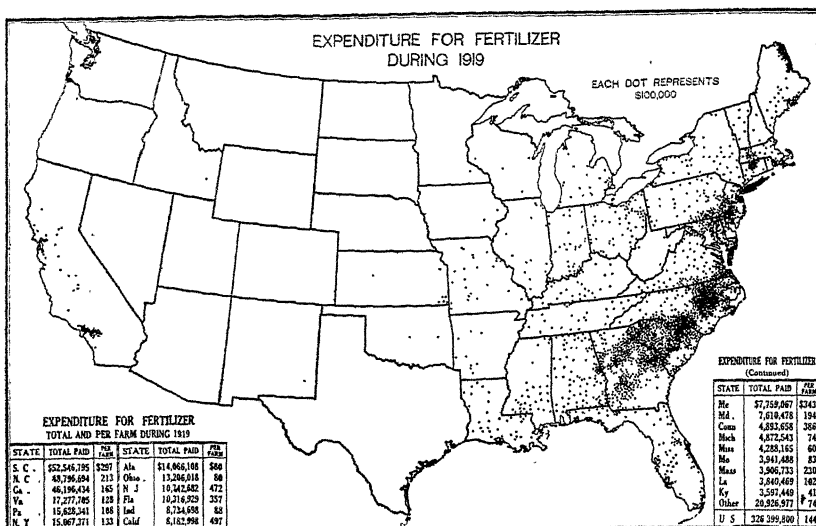


FIG. 109.—Fertilizer is used at present principally on the more intensively cultivated crops, particularly cotton, tobacco, fruit, and truck, including potatoes; and almost wholly as yet in the Eastern States, where the rainfall is heavier and the soils more leached. About half of the expenditure in 1919 was in the Coastal Plain and Piedmont portions of Georgia, the Carolinas, and Virginia. Minor areas are the trucking districts of New Jersey and Long Island, the tobacco-onion district of the Connecticut Valley, the Aroostook potato district in Maine, and the fruit-trucking district in southern California. Especially significant and prophetic is the considerable expenditure shown in Ohio and Indiana and even in Illinois and Iowa.

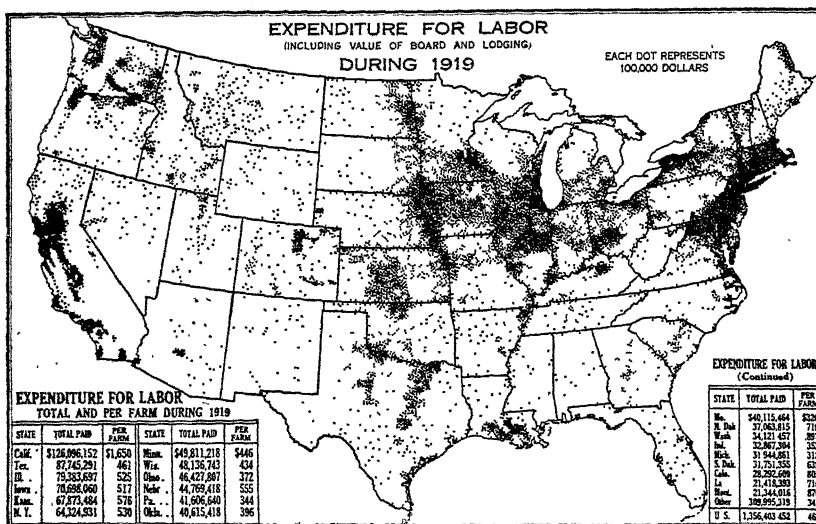


FIG. 110.—The expenditure for labor in 1919 was greatest in the trucking, fruit, and dairying areas, especially the coastal belt from Norfolk, Va., to Salem, Mass., the Ontario lowland of New York, the Elgin dairy district of northern Illinois and southern Wisconsin, and the irrigated valleys of the West. Heavy expenditure is also shown in most of the Corn Belt, and somewhat less in the Winter and Spring Wheat Areas. Although cotton is a crop requiring much more labor than any other major crop, the cash expenditure is small in the Cotton Belt because most of the labor is furnished by croppers and tenants. In the Black Prairie of Texas, however, many Mexicans are hired to pick cotton.

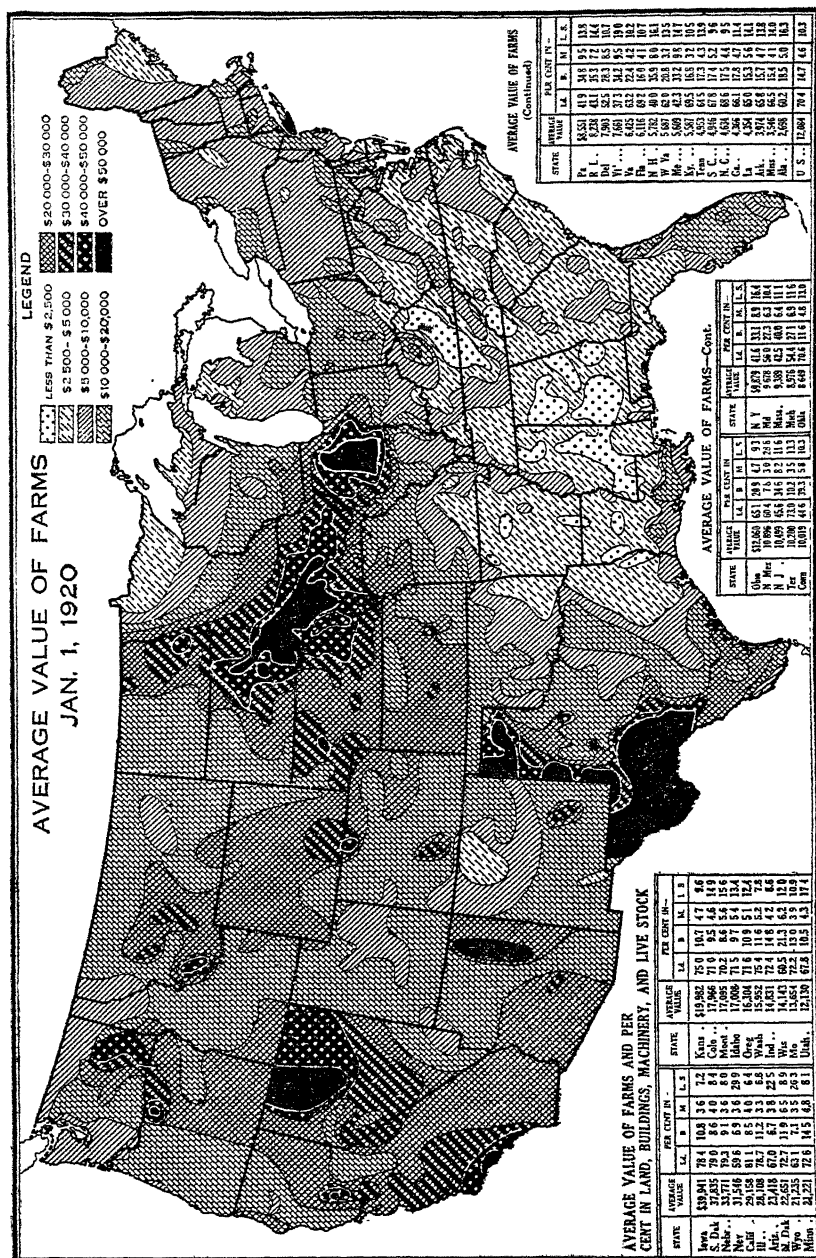


FIG. 111.—The average value of farms, including buildings, machinery, and live stock, in the prairie portion of the Corn Belt and the southern part of the Spring Wheat Region is about \$40,000. The high values shown in western Texas and northern Nevada are mostly of cattle ranches, which are few in number and large in area, often including thousands of acres of arid range. In central and southern California, on the other hand, many of the high-priced farms are small, but consist of expensive orchards, or of bean or sugar-beet land. The very low-priced farms shown in the eastern Cotton Belt are, in large part, small cropper or tenant holdings in plantations. The light areas in Kentucky and Tennessee represent poor mountain farms.

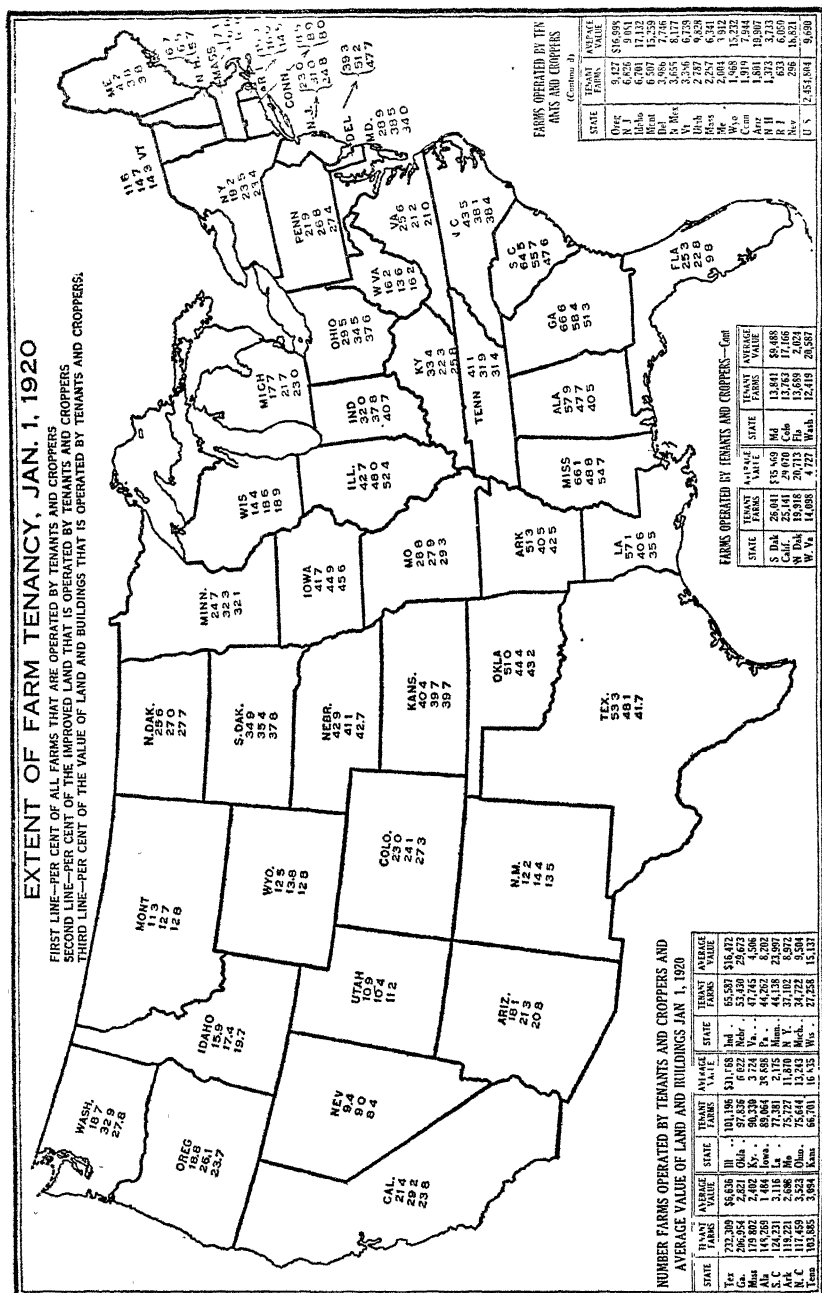


FIG. 112.—The extent of farm tenancy is commonly measured by the proportion of farmers who are tenants; but often of equal significance is the proportion of the improved land, or the proportion of the value of land and buildings included in their farms. In Illinois, for instance, less than 43 per cent of the farmers are tenants, but these tenants operate 48 per cent of the improved land, and their farms include over 52 per cent of the value of land and buildings in the State. In Alabama, on the other hand, nearly 58 per cent of the farmers are tenants, but the tenants operate only about the same proportion of improved land as the tenants in Illinois, and their farms include only about 40 per cent of the value of land and buildings.

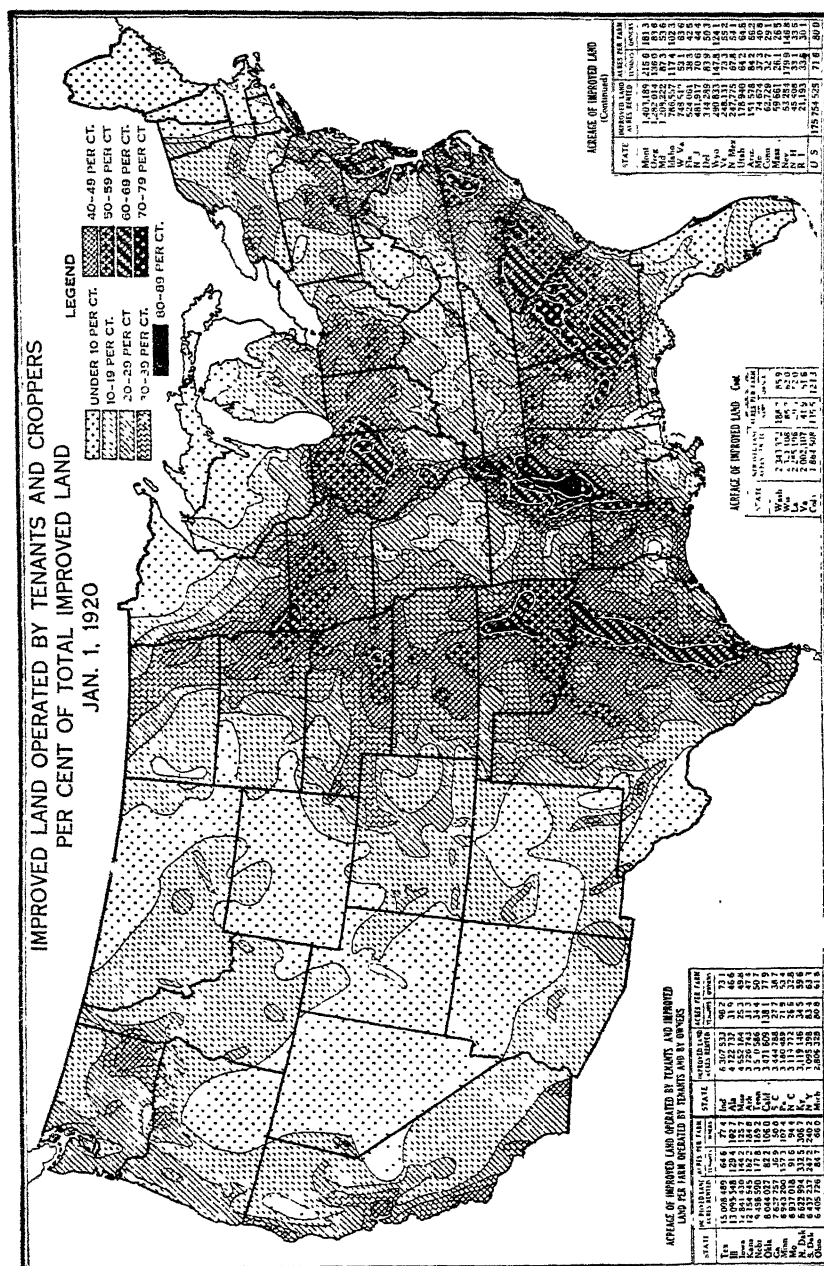


FIG. 113.—This map shows the relative extent of tenancy from the standpoint of improved land. The principal areas having over 60 per cent of the improved land operated by tenants are the richest portions of the Corn Belt and of the Cotton Belt (see Figs. 22 and 24). These are our most productive areas (see Fig. 21), in which many of the farmers or planters can afford to retire to town and be supported by the rent of their farms. The small proportion of improved land operated by tenants in the hills of New England, in the southern Appalachian Mountains, on the sandy lower coastal plain of the South, and in the arid areas of the West is noteworthy.

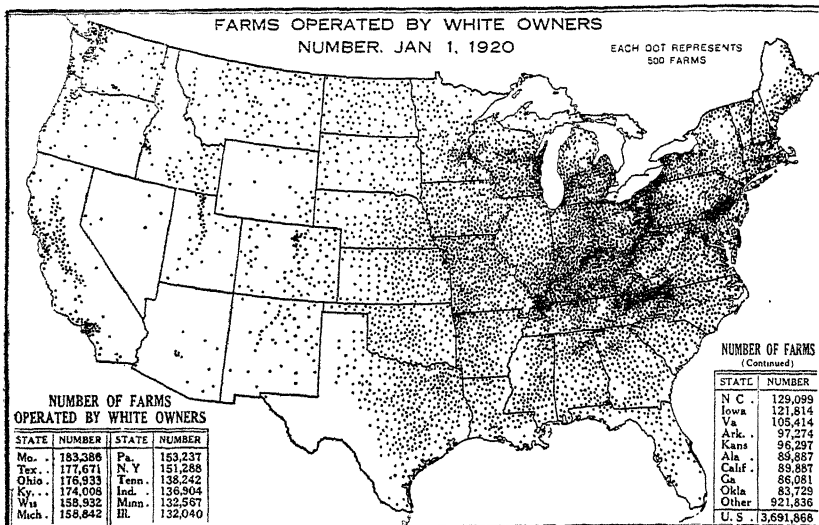


FIG. 114.—The largest number of farms operated by white owners is found among the Germans of southeastern Pennsylvania and eastern Wisconsin, the mountaineers of western Pennsylvania and the southern Appalachians, and the pioneers in the West. The fewer number of farm owner-operators in the prairie portion of the Corn Belt, as compared with the originally forested portion (see Fig. 7), is noteworthy. This is due, in part, to the larger, consequently fewer, farms (see Fig. 102), and in part to the larger proportion of tenants (see Fig. 112). The thinner distribution in northern New England, the upper Lakes region, and the West is owing to fewer farms and not to a smaller proportion of farms operated by owners (see Fig. 113).

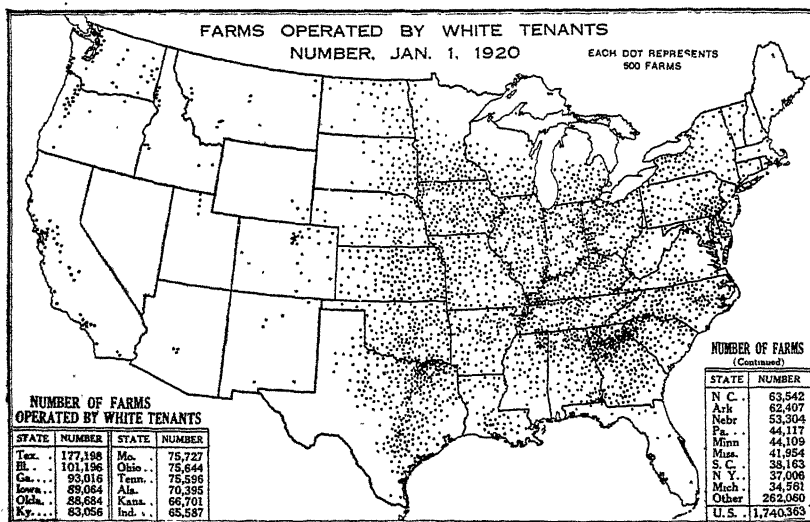


FIG. 115.—The largest number of farms operated by white tenants is in the upper Piedmont of the Carolinas, Georgia, and Alabama, and in the Black Waxy Prairie of Texas. In these districts negroes are less numerous than to the South and East, and the cotton is grown mostly by white farmers. The proportion of tenancy is about the same as in central Illinois. A large number of white tenants are shown in Kentucky and western Ohio, especially in the tobacco districts, and throughout the Corn Belt. The small number of tenants, as compared with owners (Fig. 114), is notable in the Hay and Pasture Region and in the West.

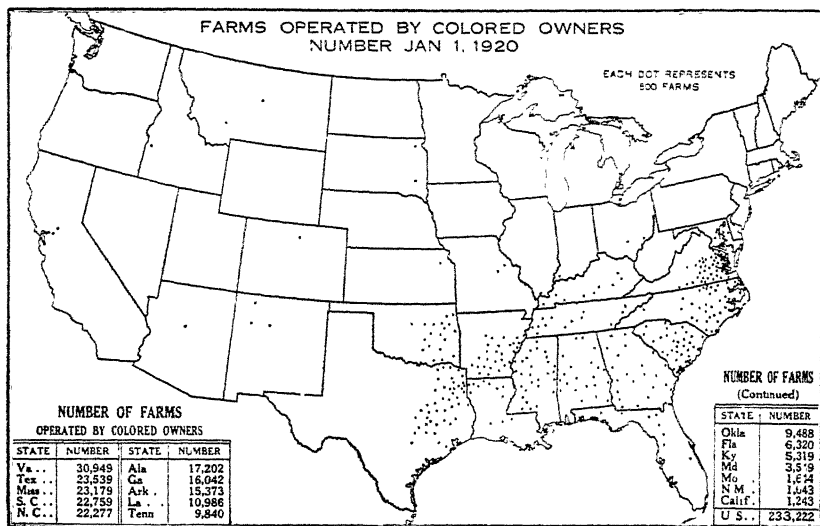


FIG. 116.—The largest number of farms operated by negro owners is found in eastern Virginia, southeastern South Carolina, and northeastern Texas, all areas of cheap land. In Virginia there are almost twice as many farms operated by negro owners as by negro tenants, and in Florida the numbers are about equal, but in the Cotton Belt tenants greatly exceed owners in number (see Fig. 117). Of the 233,222 farms in the United States operated by negro and non-white owners, only 9,153 are in the North and West. However, 71 per cent of the negro and non-white farmers in the North and West own their farms, as compared with 24 per cent in the South. The dots in the western States represent mostly farms owned and operated by Indians, Chinese, and Japanese.

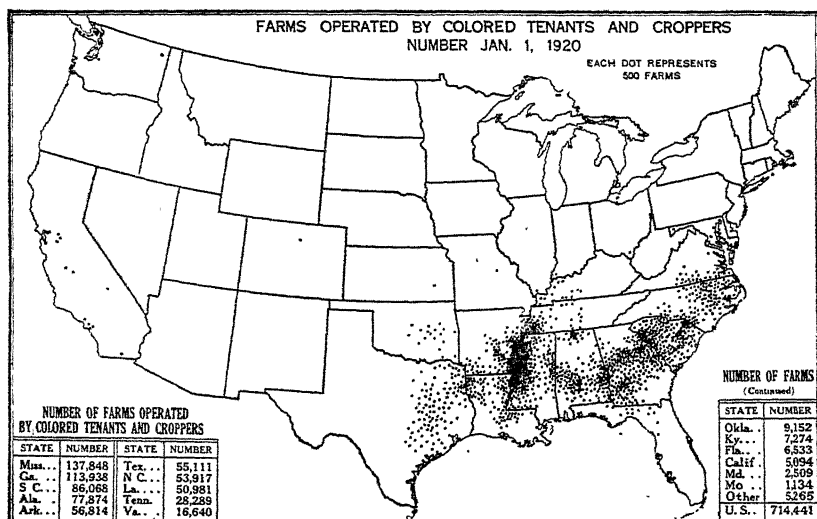


FIG. 117.—The negro tenant and cropper farms or holdings are located mostly in the Yazoo-Mississippi Delta, in the Black Prairie of Alabama, and in the upper Coastal Plain and Piedmont of Georgia and the Carolinas—districts having the richest soils in the old South. Many of these "farms" are merely allotments to croppers on plantations, the owner of the plantation furnishing the "cropper" with his mule, his farm implements, and sometimes, even, with food, until the crop is "made" in the fall and the proceeds divided between them. Negro tenants are much fewer in Texas because of historical reasons. The dots shown in California represent mostly Japanese and Chinese tenant farmers.

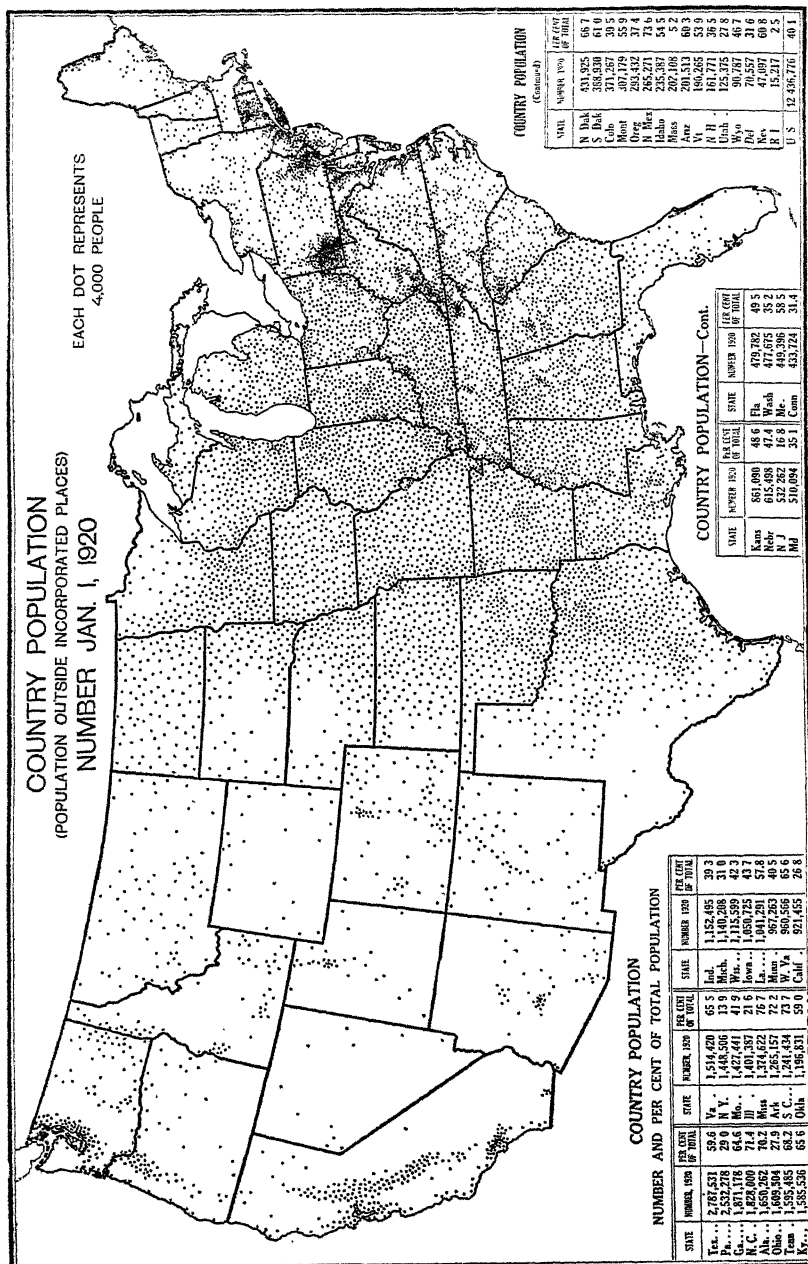


FIG. 118.—Statistics of population outside incorporated places, although including many suburbanites, mill workers, and miners, especially in Pennsylvania, afforded the closest approximation to farm population prior to June, 1922. In the 1920 census the enumerators indicated for the first time persons living on farms. The resulting tabulation shows 31,614,000 people, or about three-fourths those living outside incorporated places. However, a map of farm population showing distribution by counties, like the map above, could not be prepared, as the statistics were tabulated only by States. Figure 97, showing number of farms, may be used to compare the relative density of farm population in different parts of the United States, since the number of people per farm ranges from four to five in most States, except in the South, where there are five to six.

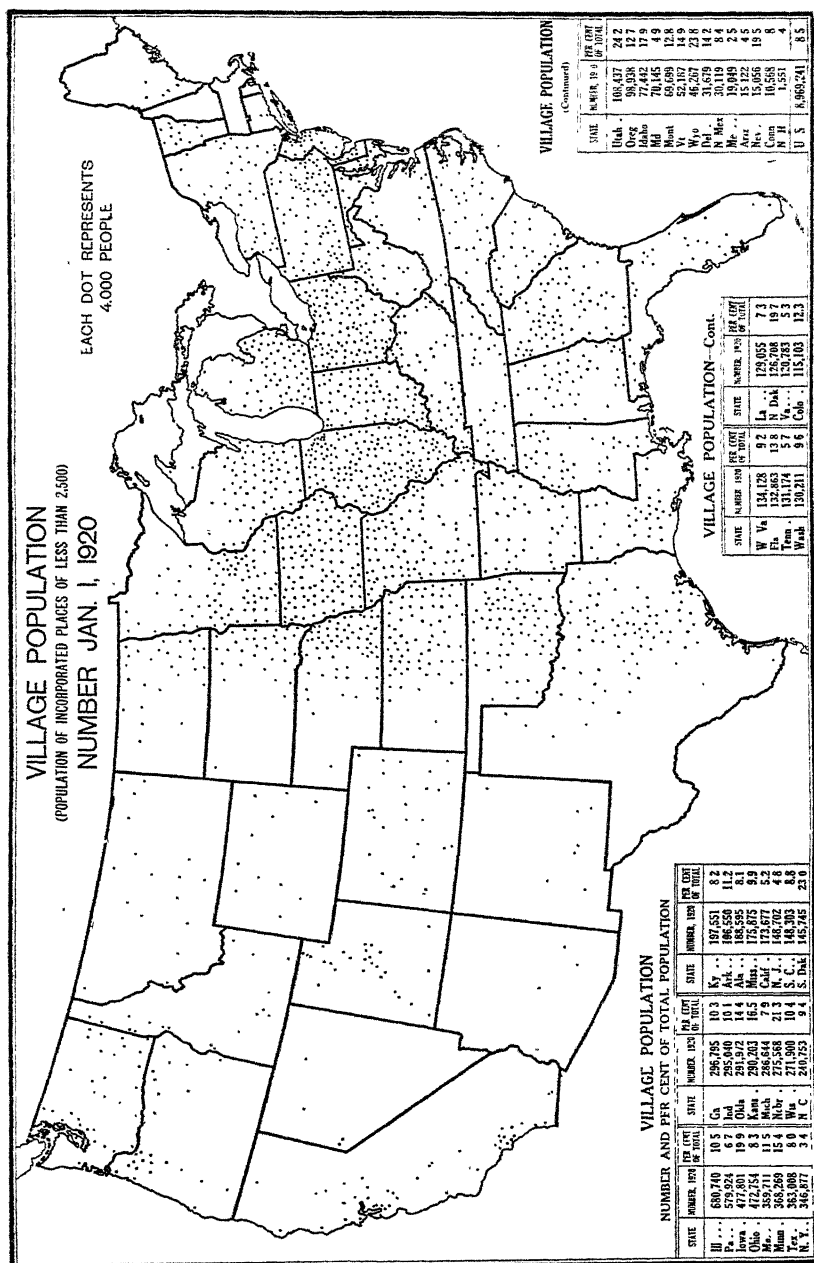


FIG. 119.—"Village" population includes many people living on farms within the village limits. It includes also many retired farmers, especially in the Corn Belt and in the South and West, and tradesmen who serve the farmers' needs. In the Northeast a considerable factory population resides in villages. The geographic distribution of village population in the Corn Belt, and in the Spring Wheat and the southwestern portion of the Hay and Pasture regions, is remarkably uniform. Whereas, farm population and country population (see Figs. 97 and 118) are densest in the South and East, village population is densest in the Corn Belt. It is also relatively dense in Utah, where many of the Mormon farmers live in villages.

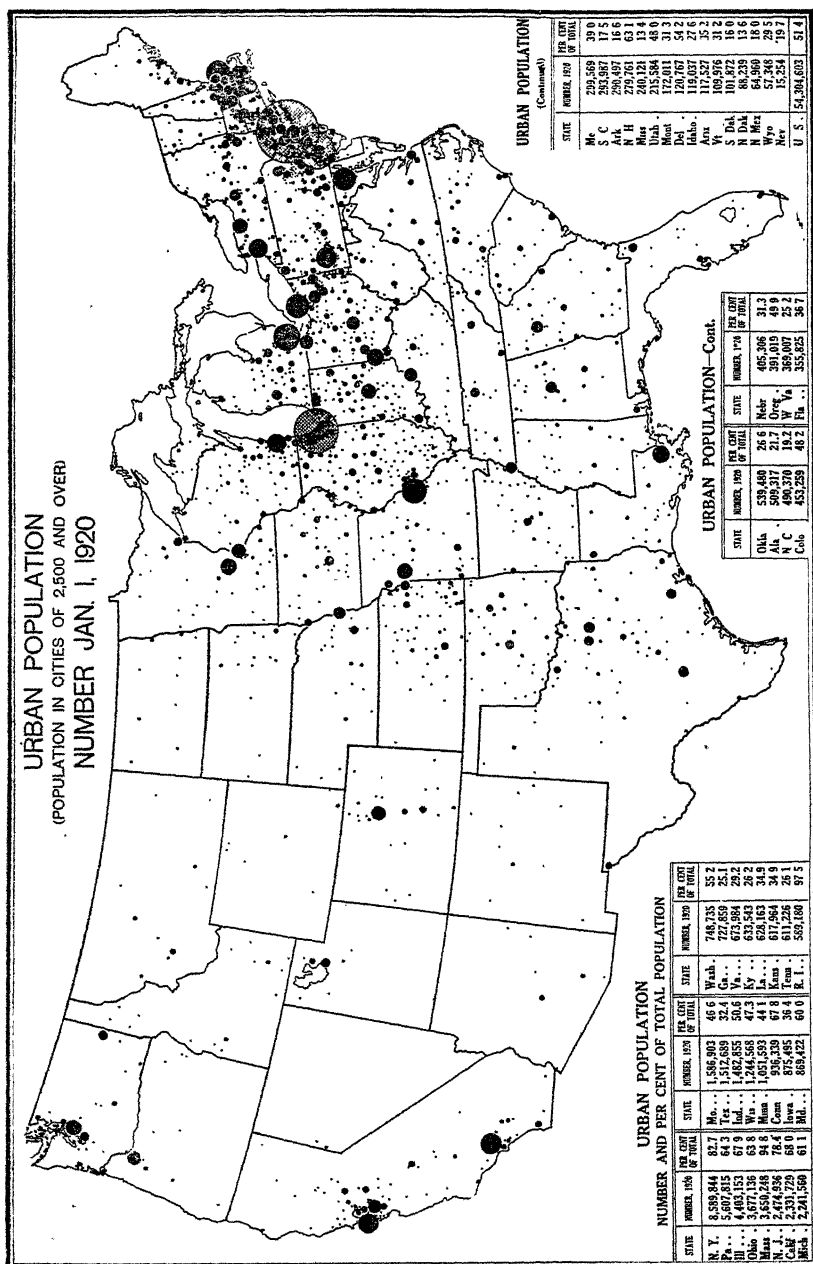


FIG. 120.—Over half of the urban population in the United States resides within the Hay and Pasture Region. The urban population in this region constitutes nearly three-fourths of its total population, and over-one-fourth of the total population of the United States. Into this region the food and fibers of the West and South constantly move. The center of urban population, however, is located in the eastern portion of the Corn Belt, near Piqua, Ohio; while the center of agricultural production is over 400 miles to the west, near Jefferson City, Mo. Outside this Hay and Pasture Region the principal centers of urban population are found along the northern margin of the Corn and Winter Wheat Region, and on or near the Pacific coast. Towns of 2,500 to 10,000 population are shown by the smaller size dot; larger cities by circles of varying size.

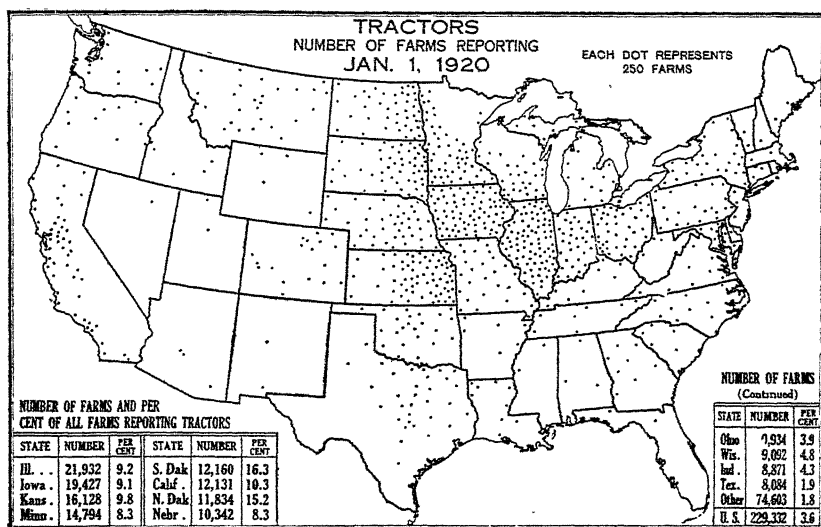


FIG. 121.—Tractors are most numerous in the Corn Belt, in the Spring and Winter Wheat Areas, and in California. In the Spring Wheat Area, on January 1, 1920, about 1 farm in 6 had a tractor; in the Corn Belt, in Kansas, and in California about 1 farm in 10; elsewhere in the United States 1 farm in 20 to 50, except in the States south of the Ohio and Potomac Rivers, where less than 1 farm in 100 had a tractor. The acreage of cotton a farmer can handle is not limited by the acreage he can plow and plant, as with wheat, or can cultivate, as with corn, but by the amount he can pick, and a tractor can not help in picking cotton.

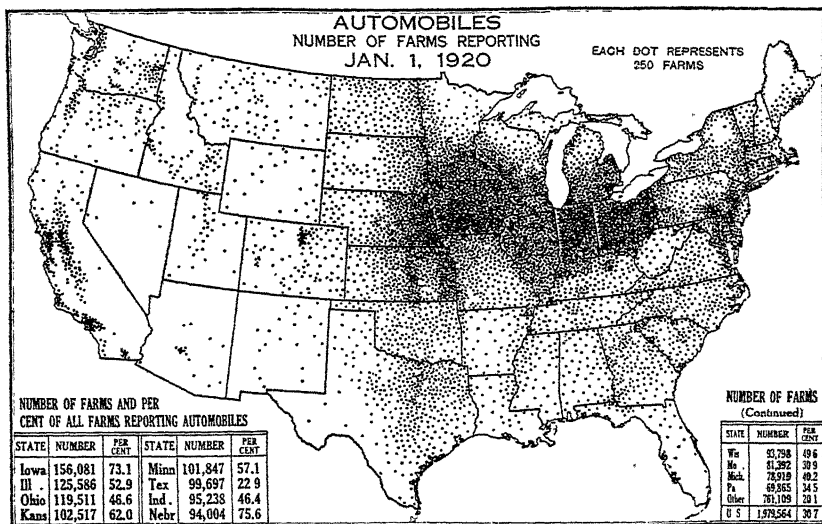


FIG. 122.—Two-fifths of the 2,000,000 automobiles on farms in the United States, January 1, 1920, were in the Corn Belt (see Fig. 104). From one-half in the eastern portion to three-fourths of the farms in the western portion of the Corn Belt had automobiles, and about half the farms in Wisconsin, Minnesota, the Dakotas, and California. Eastward from the Corn Belt the proportion drops to one-third of the farms in New York and one-fourth in New England; southward it drops to one-seventh in the Carolinas and Georgia and to one-twentieth in Mississippi. An automobile is of little help to a negro cropper, or even a poor white tenant in the South, either in marketing his cotton or in attending to his business.

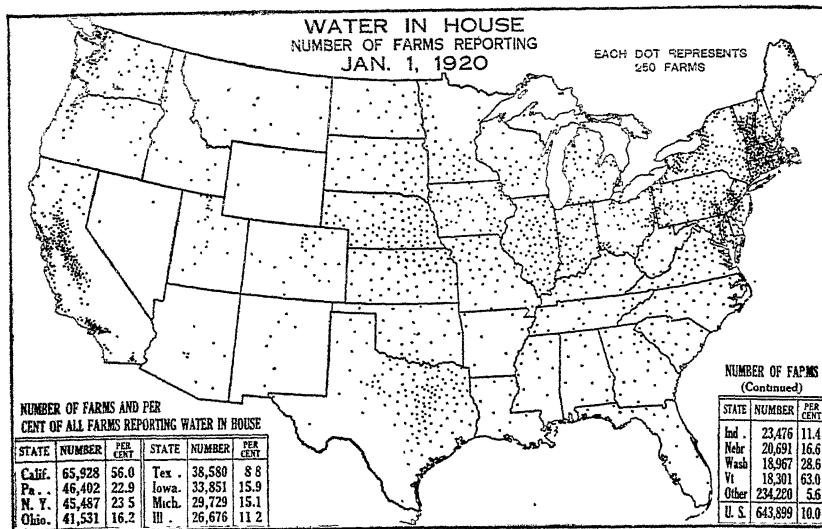


FIG. 123.—About one-half of the farms in New England and in California have water piped into the house, about one-fourth of the farms in New York, Pennsylvania, Oregon, and Washington; about one-eighth of the farms in the Corn Belt; and 1 farm in 50 to 100 in the Cotton Belt. These differences are due, in part, to differences in per capita rural wealth in the several sections of the United States, and in the percentage of tenancy, and in part to differences in the consideration shown for the health and comfort of the housewife.

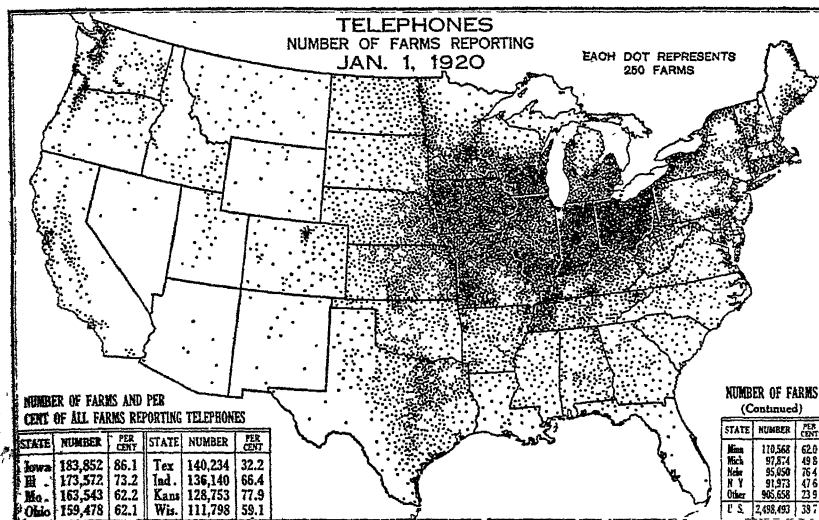


FIG. 124.—Telephones are most common on the farms of the Corn Belt and of Kansas, in which region from 60 to 90 per cent, varying with the State, possess this convenience. In the Hay and Pasture, the Spring Wheat, and the Pacific Coast Regions about half the farms have telephones; in Texas and Oklahoma about one-third of the farms; in the Corn and Winter Wheat Region (except Kansas), in the Great Plains and the Rocky Mountain Regions about a quarter of the farms; but in the Cotton Belt, east of Texas and Oklahoma, only from 5 to 15 per cent. The proportion of the farms possessing a telephone is indicative of the general diffusion of rural progress and prosperity.

APPENDIX.

STATISTICS OF GRAIN CROPS, 1921.

CORN.

TABLE 1.—*Corn: Area and production in undermentioned countries, 1909-1921.*

Country.	Area.				Production			
	Average 1909-1913. ¹	1919	1920	1921	Average 1909-1913. ¹	1919	1920	1921
NORTH AMERICA.	<i>1,000 acres.</i>	<i>1,000 acres.</i>	<i>1,000 acres.</i>	<i>1,000 acres.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>
United States.....	104,229	97,170	101,699	103,550	2,708,354	2,811,302	3,208,584	3,080,372
Canada:								
Ontario.....	291	221	244	251	17,436	15,152	12,915	13,542
Quebec.....	24	44	48	46	726	1,788	1,420	1,862
Other.....					6			
Total, Canada..	315	265	292	297	18,178	16,940	14,335	14,904
Mexico.....	11,554				164,657			
Total, North America.....	116,098				2,891,169			
SOUTH AMERICA.								
Argentina.....	8,128	9,800	8,184	8,090	174,502	240,144	258,690	230,423
Chile.....	56	65		57	1,390	1,702	1,702	1,805
Uruguay.....	551	552	495		6,027	6,574	2,784	
Total, South America.....	8,735	10,417			181,919	248,420	263,176	
EUROPE.								
Austria.....	² 761	104	102		³ 14,536	2,115	2,122	2,456
Bosnia Herzegovina ²	578				9,111			
Croatia Slavonia ²	1,036				24,873			
Bulgaria.....	² 1,544	1,392	1,399	1,418	² 28,219	39,412	34,427	34,385
Czechoslovakia.....			376	363	⁴ 448	9,648		10,501
France.....	² 1,155	744	829	810	² 22,229	10,113	15,267	12,202
Greece.....			519	492			9,135	7,874
Hungary.....	² 6,038		2,017	1,950	² 168,081		50,156	27,141
Italy.....	3,931	3,709	3,710	3,707	100,349	88,846	89,299	94,484
Portugal.....		597			15,000	6,495		
Rumania.....	² 5,143	⁴ 6,751	² 7,330	6,959	² 100,020	⁴ 137,412	² 92,952	⁷ 99,036
Russia proper.....	² 3,173				² 56,571			
Northern Caucasia.....	² 750				² 13,651			
Serbia.....	² 1,445				² 28,128			
Spain.....	1,134	1,179	1,168	1,181	26,548	25,555	27,693	28,048
Switzerland.....		6	6	5		287	280	218
Yugoslavia.....			3,018			64,753	86,556	
Total, Europe..	26,688				607,916			
ASIA.								
British India.....	6,340	6,039	6,616		87,240	71,288	98,760	
Japan.....	130	137	139		3,637			
Philippine Islands..	992	1,064	1,327		7,446	13,095	16,978	18,108
Total, Asia... ¹	7,462	7,240	8,082		98,323			
AFRICA.								
Algeria.....	34	15	22	24	461	236	254	358
Tunis.....	43	45	25	50		257	110	315
Egypt.....	1,857	1,792	1,938		64,220	63,977	70,569	
French Morocco.....		475	309	375		3,114	3,436	3,726
Union of South Africa		3,982	3,122	3,493	26,498	41,422	43,916	43,320
Total, Africa..		6,279	5,416			109,006	118,285	

¹ Five-year average, except in a few cases where statistics were unavailable.

² Old boundaries.

³ Bohemia, Silesia, and Moravia.

⁴ Former Kingdom, Bessarabia, and Bukovina.

⁵ Former Kingdom, Bessarabia, Bukovina and Transylvania.

⁶ Former Kingdom, and Bessarabia only.

⁷ Winchester bushels.

CORN—Continued.

TABLE 1.—*Corn: Area and production in undermentioned countries, 1909-1921—Con.*

Country.	Area.				Production.			
	Average 1909-1913.	1919	1920	1921	Average 1909-1913.	1919	1920	1921
AUSTRALASIA.	1,000 acres.	1,000 acres.	1,000 acres.	1,000 acres.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.
Australia:								
Queensland.....	143	150	105	.....	3,280	4,106	1,831	.....
New South Wales	190	115	137	.....	6,091	2,092	4,052	.....
Victoria.....	18	23	23	.....	887	712	879	.....
Western Australia.....	.....	(⁸)	(⁸)	.....	1	.....	(⁸)	.....
South Australia..	1	(⁸)	(⁸)	.....	5	2	2	.....
Total, Australia	352	298	265	.....	10,264	6,913	6,764	.....
New Zealand.....	10	10	9	11	493	415	406	439
Total Australasia.....	362	298	274	.....	10,757	7,328	7,170	.....
Grand total....	161,279	.....	.....	.....	3,881,263	.....	.....	.....

⁸ Less than 500.TABLE 2.—*Corn: World production so far as reported, 1895-1921.*

Year.	Production.	Year.	Production.	Year.	Production.	Year.	Production.
	<i>Bushels.</i>		<i>Bushels.</i>		<i>Bushels.</i>		<i>Bushels.</i>
1895.....	2,834,750,000	1902.....	3,187,311,000	1909.....	3,563,226,000	1916.....	3,309,813,000
1896.....	2,964,435,000	1903.....	3,066,506,000	1910.....	4,031,630,000	1917.....	3,540,863,000
1897.....	2,537,206,000	1904.....	3,109,252,000	1911.....	3,481,007,000	1918.....	3,129,473,000
1898.....	2,682,619,000	1905.....	3,461,181,000	1912.....	4,371,888,000	1919.....	3,649,815,000
1899.....	2,724,100,000	1906.....	3,963,645,000	1913.....	3,587,423,000	1920.....	4,144,821,000
1900.....	2,792,561,000	1907.....	3,420,321,000	1914.....	3,777,913,000	1921.....	3,710,115,000
1901.....	2,366,883,000	1908.....	3,606,931,000	1915.....	4,231,780,000		

TABLE 3.—*Corn: Average yield per acre in undermentioned countries, 1890-1921.*

Year	United States.	Russia (European). ¹	Italy.	Austria.	Hungary (proper).	France.	Argentina.
Average:	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1890-1899.....	24.5	13.6	15.3	19.5	23.0	19.1	.....
1900-1909.....	25.8	13.9	21.4	18.9	22.2	18.9	26.6
1910-1919.....	26.2	* 16.7	24.7	21.0	* 28.0	17.8	19.2
1919.....	28.9	.....	23.1	20.3	.....	15.9	24.5
1920.....	31.5	.....	24.1	20.8	24.9	13.6	31.6
1921.....	29.7	.....	.....	.....	13.9	17.2	28.5

¹ Excludes Poland.

* 7-year average.

* 6-year average.

CORN—Continued.

TABLE 4.—Corn: Acreage, production, value, exports, etc., in the United States, 1849-1921.

NOTE.—Figures in *italics* are census returns; figures in roman are estimates of the Department of Agriculture. Estimates of acres are obtained by applying estimated percentages of increase or decrease to the published acreage of the preceding year, except that a revised base is used for applying percentage estimates whenever new census data are available. Acreages have been revised for years 1890-1908, so as to be consistent with the following as well as the preceding census acreage, and total production and farm values are adjusted accordingly.

Year.	Acreage (000 omitted).	Average yield per acre.	Production (000 omitted).	Average farm price per bushel Dec. 1.	Farm value Dec. 1 (000 omitted).	Chicago cash price per bushel, contract. ¹				Domestic exports, including corn meal, fiscal year beginning July 1.	Imports during fiscal year beginning July 1.	Per cent of crop ex- ported
						Decem- ber.		Follow- ing May.				
						Low.	High.	Low.	High.			
	Acres.	Bush.	Bushels.	Cents.	Dollars.	Cts.	Cts.	Cts.	Cts.	Bushels.	Bushels.	P. ct.
1849.....			592,071							7,632,860		1.5
1850.....			683,792							4,248,991	49,190	1.5
1850-1875.....	37,210	26.1	949,948	46.9	454,537	46	55	50	59	24,242,396	66,070	2.5
1876-1885.....	61,671	25.4	1,564,992	39.5	617,780	42	48	44	49	69,061,110	33,334	4.4
1886-1895.....	74,274	23.8	1,769,616	36.7	648,785	38	43	40	51	59,293,085	11,445	3.4
1895.....	86,500	28.9	2,503,484	21.3	532,884	22½	23½	23	25½	178,817,417	6,284	7.8
1897.....	83,127	24.3	2,144,558	26.0	558,306	25	27½	32½	37	212,055,543	3,417	11.1
1898.....	88,304	25.6	2,261,119	28.4	642,747	33½	38	32½	34½	177,255,046	4,171	9.2
1899.....	94,614	25.9	2,454,626	29.9	734,917	30	31½	36	40½	213,123,412	2,480	10.3
1900.....	95,042	26.4	2,505,148	35.1	875,243	35½	40½	42½	58½	181,405,473	5,169	8.6
1901.....	94,636	17.0	1,607,285	60.0	964,543	62½	67½	59½	64½	28,028,688	18,278	1.8
1902.....	95,517	27.4	2,620,699	40.0	1,048,735	43½	57½	44	46	70,639,261	40,919	3.0
1903.....	90,661	25.8	2,339,417	42.1	984,173	41	43½	47½	50	58,222,061	16,633	2.6
1904.....	93,340	27.0	2,520,682	43.7	1,101,430	43½	49	48	64½	90,293,483	15,443	3.7
1905.....	93,573	29.3	2,744,329	40.7	1,116,817	42	50½	47½	50	119,893,833	10,127	4.4
1906.....	93,648	30.9	2,895,822	39.2	1,135,969	40	46	49½	56	86,368,228	10,818	3.0
1907.....	94,971	26.5	2,512,065	50.9	1,277,607	57½	61½	67	82	55,063,860	20,312	2.1
1908.....	95,603	26.6	2,544,957	60.0	1,527,679	56½	62½	72½	76	37,665,040	258,065	1.4
1909.....	98,888	26.1	2,572,336	58.6	1,507,185	62½	66	56	63	38,128,498		1.5
1910 ¹	104,035	27.7	2,886,260	48.0	1,384,817	45½	50	52½	55½	65,614,522		2.3
1911.....	105,825	23.9	2,531,488	61.8	1,565,258	68	70	76½	82½	41,797,291	53,425	1.7
1912.....	107,083	29.2	3,124,746	48.7	1,520,454	47½	54	55½	60	50,780,143	908,062	1.6
1913.....	105,820	23.1	2,446,988	69.1	1,692,092	64	73½	67	72½	10,725,819	12,367,369	.4
1914.....	103,435	25.8	2,672,804	64.4	1,722,070	62½	68½	50½	56	50,668,303	9,897,939	1.9
1915.....	106,197	23.2	2,994,793	57.5	1,722,680	69½	75	69	78½	39,896,928	5,208,497	1.3
1916.....	105,296	24.4	2,566,927	88.9	2,280,729	88	96	152	174	66,753,294	2,267,299	2.6
1917.....	116,730	26.3	3,065,233	127.9	3,920,228	160	190	150	170	49,073,263	3,196,420	1.6
1918.....	104,437	24.0	2,502,665	136.5	3,416,240	135	155	160½	185	23,018,822	3,311,211	.2
1919 ¹	97,170	23.9	2,311,302	134.5	3,780,597	142	160	189	217	16,728,746	10,223,243	.6
1920.....	101,639	31.5	3,208,384	67.0	2,150,332	70½	86	59	66	70,905,781	5,743,384	2.2
1921 ²	103,850	29.7	3,080,372	42.3	1,302,670	46½	51½					

¹ No. 2 to 1908.

² Acreage adjusted to census basis.

³ Preliminary estimate.

CORN—Continued.

TABLE 5.—*Corn: Acreage, production, and total farm value, by States, 1919–1921.*

State.	Thousands of acres.			Production (thousands of bushels).			Total value, basis Dec. 1 price (thousands of dollars).		
	1919	1920	1921 ¹	1919	1920	1921 ¹	1919	1920	1921 ¹
Maine.....	31	29	30	1,705	1,305	1,500	3,325	1,670	1,155
New Hampshire.....	23	24	25	1,070	1,080	1,325	1,819	1,566	994
Vermont.....	79	81	82	3,672	3,807	4,510	6,430	4,797	3,423
Massachusetts.....	64	64	65	3,347	2,560	3,120	5,757	3,200	2,402
Rhode Island.....	13	14	14	585	560	644	1,088	1,008	708
Connecticut.....	74	74	74	3,700	2,960	3,348	6,660	4,144	3,463
New York.....	762	767	798	32,766	30,680	36,708	54,392	35,589	24,594
New Jersey.....	261	236	241	10,440	10,384	11,327	15,973	8,826	6,003
Pennsylvania.....	1,581	1,556	1,589	74,307	70,020	76,272	109,231	70,020	41,950
Delaware.....	178	173	177	5,340	6,488	6,549	7,743	4,866	2,947
Maryland.....	645	650	645	26,445	25,025	25,155	37,023	20,270	12,826
Virginia.....	1,868	1,884	1,904	52,304	56,520	47,600	88,394	56,520	32,844
West Virginia.....	600	600	592	20,400	20,128	33,456	23,664	15,096	15,096
North Carolina.....	2,531	2,428	2,552	48,089	54,630	49,254	88,965	61,732	38,418
South Carolina.....	1,796	1,830	2,022	28,736	34,770	32,959	56,610	40,333	24,390
Georgia.....	4,376	4,393	4,665	63,452	65,895	69,975	101,523	69,190	37,087
Florida.....	800	750	788	12,000	10,125	11,032	16,800	10,125	5,847
Ohio.....	3,943	3,965	3,886	169,549	172,081	159,326	205,154	117,015	65,324
Indiana.....	4,852	4,834	4,718	180,634	195,777	169,848	225,792	115,508	62,844
Illinois.....	8,579	9,079	8,999	308,844	314,133	305,966	401,497	185,338	116,267
Michigan.....	1,641	1,706	1,703	60,717	66,534	66,417	83,789	54,558	31,880
Wisconsin.....	1,882	2,067	2,110	84,690	89,294	97,482	105,862	68,756	44,842
Minnesota.....	2,998	3,288	3,427	119,920	123,300	140,507	143,904	62,883	43,557
Iowa.....	9,959	10,300	10,330	414,294	473,800	444,190	497,153	222,686	133,257
Missouri.....	5,962	6,646	6,096	160,974	212,672	182,880	222,144	136,110	73,152
North Dakota.....	432	569	605	14,256	13,656	16,940	19,958	9,832	5,760
South Dakota.....	3,288	3,650	3,926	93,708	109,500	125,632	111,513	45,990	32,664
Nebraska.....	7,030	7,560	7,419	184,186	255,528	207,732	224,707	104,766	56,088
Kansas.....	4,188	5,007	4,601	63,658	132,686	102,142	89,121	58,382	31,664
Kentucky.....	3,454	3,334	3,209	82,896	101,687	82,150	128,489	83,383	45,182
Tennessee.....	3,446	3,511	3,516	73,744	98,308	90,713	115,778	85,528	47,171
Alabama.....	3,655	3,593	4,042	52,998	56,410	62,651	84,267	55,282	38,844
Mississippi.....	2,845	2,770	3,172	42,675	44,320	57,096	68,280	45,206	31,974
Louisiana.....	1,523	1,569	1,796	26,652	30,125	35,022	39,978	25,606	22,764
Texas.....	5,016	5,487	6,227	150,480	142,662	156,920	177,566	119,836	84,737
Oklahoma.....	2,611	2,820	3,077	62,664	78,960	76,925	79,583	42,638	24,616
Arkansas.....	2,328	2,330	2,734	41,904	54,522	60,148	68,723	52,886	34,284
Montana.....	133	184	200	532	2,226	2,560	878	1,781	1,715
Wyoming.....	44	50	56	704	1,200	1,232	1,162	672	616
Colorado.....	1,021	1,182	1,102	15,315	24,231	15,979	21,747	16,962	4,953
New Mexico.....	254	276	290	5,486	5,989	6,409	8,284	6,588	5,768
Arizona.....	31	29	35	899	638	1,015	1,798	1,085	1,015
Utah.....	20	24	21	384	526	517	576	789	393
Nevada.....	1	1	1	27	32	29	38	51	35
Idaho.....	40	45	47	1,280	1,620	1,598	2,112	1,620	799
Washington.....	61	62	60	2,196	2,232	2,400	4,063	2,790	2,064
Oregon.....	72	69	66	1,908	2,139	1,980	2,957	2,781	1,663
California.....	149	139	116	4,768	4,587	4,060	8,535	5,504	3,126
United States.....	97,170	101,699	103,850	2,811,302	3,208,584	3,080,372	3,780,597	2,150,332	1,302,670

¹ Preliminary estimate.

CORN—Continued.

TABLE 6.—Corn: Production and distribution in the United States, 1897–1921.

[000 omitted under bushels.]

Year.	Old stock on farms Nov. 1.	Crop.			Total supplies.	Stock on farms Mar. 1 following.	Shipped out of county where grown.
		Quantity.	Quality.	Proportion merchantable.			
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1897–1901.....	146,125	1,906,584	83.3	83.6	1,713,997	2,052,709	706,886
1902–1906.....	88,528	2,574,143	88.1	82.9	2,144,838	2,662,671	1,050,063
1907.....	130,995	2,592,320	82.8	77.7	2,013,208	2,723,315	962,429
1908.....	71,124	2,668,651	86.9	88.2	2,353,370	2,739,775	1,047,763
1909.....	79,779	2,552,190	84.2	82.5	2,104,775	2,631,969	977,561
1910.....	115,696	2,886,260	87.2	86.4	2,492,762	3,001,956	1,165,378
1911.....	123,824	2,531,488	80.6	80.1	2,027,923	2,655,312	884,069
1912.....	64,004	3,124,746	85.5	85.0	2,654,907	3,189,510	1,290,642
1913.....	137,972	2,446,988	82.2	80.1	1,961,058	2,584,960	866,352
1914.....	80,046	2,672,804	85.1	84.5	2,259,755	2,752,850	910,894
1915.....	96,009	2,994,793	77.2	71.1	2,127,965	3,090,802	1,116,559
1916.....	87,908	2,566,927	83.8	83.9	2,154,487	2,654,835	782,303
1917.....	34,448	3,065,233	75.2	60.0	1,837,728	3,099,681	1,253,290
1918.....	114,678	2,502,665	85.6	82.4	2,062,041	2,617,343	855,299
1919.....	69,835	2,811,302	89.1	87.1	2,448,204	2,851,137	1,045,575
1920.....	139,063	3,208,584	89.6	86.9	2,789,720	3,347,667	1,564,832
1921.....	285,769	3,080,372	84.0	87.5	2,695,104	3,366,141	1,313,120

TABLE 7.—Corn: Condition of crop, United States, on first of months named, 1901–1921.

Year.	July.	Aug.	Sept.	Oct.	Year.	July.	Aug.	Sept.	Oct.	Year.	July.	Aug.	Sept.	Oct.
	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>		<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>		<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
1901...	81.3	54.0	51.7	52.1	1908...	82.8	82.5	79.4	77.8	1915...	81.2	79.5	78.8	79.7
1902...	87.5	86.5	84.3	79.6	1909...	89.3	84.4	74.6	73.8	1916...	82.0	75.3	71.3	71.5
1903...	79.4	78.7	80.1	80.8	1910...	85.4	79.3	78.2	80.3	1917...	81.1	78.8	76.7	75.9
1904...	86.4	87.3	84.6	83.9	1911...	80.1	69.6	70.3	70.4	1918...	87.1	78.5	67.4	68.6
1905...	87.3	89.0	89.5	89.2	1912...	81.5	80.0	82.1	82.2	1919...	86.7	81.7	80.0	81.3
1906...	87.5	88.0	90.2	90.1	1913...	86.9	75.8	65.1	65.3	1920...	84.6	86.7	86.4	89.1
1907...	80.2	82.8	80.2	78.0	1914...	85.8	74.8	71.7	72.9	1921...	91.1	84.3	85.1	84.8

TABLE 8.—Corn: Forecast of production, monthly, with preliminary and final estimates, of crops of the United States.

[000 omitted.]

Year.	July.	August.	September.	October.	November production estimate.	Final estimate.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1912.....	2,811,000	2,811,000	2,995,000	3,016,000	3,163,137	3,124,746
1913.....	2,971,000	2,676,000	2,351,000	2,374,100	2,463,017	2,446,988
1914.....	2,916,572	2,634,214	2,598,417	2,676,270	2,705,692	2,672,804
1915.....	2,814,180	2,917,954	2,984,995	3,026,159	3,090,509	2,994,793
1916.....	2,865,932	2,777,030	2,709,532	2,717,932	2,643,508	2,566,927
1917.....	3,123,772	3,190,792	3,247,512	3,210,795	3,191,083	3,065,233
1918.....	3,159,836	2,989,351	2,671,840	2,717,775	2,749,198	2,502,665
1919.....	2,815,430	2,738,378	2,857,692	2,900,511	2,910,250	2,811,302
1920.....	2,778,903	3,003,322	3,131,349	3,216,192	3,199,126	3,208,584
Average.....	2,917,403	2,864,893	2,838,593	2,872,859	2,902,391	2,821,560
1921.....	3,123,139	3,032,170	3,185,876	3,163,063	3,151,698	3,080,372

¹ Preliminary.

CORN—Continued.

TABLE 9.—*Corn: Yield per acre, price per bushel Dec. 1, and value per acre, by States.*

State.	Yield per acre (bushels).					Farm price per bushel (cents).										Value per acre (dollars). ¹			
	5-year average, 1917-1921.	1917	1918	1919	1920	1921	10-year average, 1912-1921.	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	5-year average, 1916-1920.	1921
Maine.....	46.4	37.0	45.0	55.0	45.0	50.0	125	75	87	88	85	119	228	167	195	128	77	75.11	38.50
N. Hampshire.....	55.9	40.0	45.0	46.5	45.0	53.0	119	75	81	82	76	115	217	150	170	145	75	70.30	39.75
Vermont.....	46.3	45.0	33.0	46.5	47.0	55.0	119	72	81	81	84	110	213	170	175	126	76	69.67	41.80
Massachusetts.....	47.5	45.0	52.0	52.3	40.0	48.0	121	77	85	85	80	120	215	170	172	125	77	75.10	36.96
Rhode Island.....	43.4	42.0	44.0	45.0	40.0	46.0	142	88	99	98	100	138	236	180	186	180	110	75.36	50.60
Connecticut.....	48.4	50.0	50.0	50.0	40.0	52.0	125	77	85	89	85	120	215	171	180	140	90	78.12	46.80
New York.....	39.2	31.0	36.0	43.0	40.0	46.0	114	70	81	83	78	110	198	175	166	116	67	55.03	30.82
New Jersey.....	42.8	42.0	41.0	40.0	44.0	47.0	100	68	75	76	75	100	170	150	153	85	53	54.39	24.91
Pennsylvania.....	43.8	39.0	40.0	47.0	45.0	48.0	98	63	72	73	70	97	153	155	147	100	55	54.72	26.40
Delaware.....	33.9	34.0	31.0	30.0	37.5	37.0	86	51	59	62	62	89	140	136	145	75	45	38.33	16.65
Maryland.....	38.5	39.0	35.0	41.0	38.5	39.0	88	55	65	68	61	89	140	135	140	81	49	45.03	19.11
Virginia.....	27.6	27.0	28.0	28.0	30.0	25.0	104	71	76	81	71	93	153	160	169	100	69	37.89	17.25
West Virginia.....	32.6	30.0	31.0	34.0	34.0	34.0	111	65	80	83	74	101	170	180	164	116	75	46.56	25.50
North Carolina.....	20.4	20.0	21.0	19.0	22.5	19.3	117	83	88	86	77	110	170	177	185	113	78	30.42	15.05
South Carolina.....	17.5	19.0	17.0	16.0	19.0	16.3	123	85	97	92	87	113	192	195	197	116	74	28.14	12.06
Georgia.....	15.1	16.0	15.0	14.5	15.0	15.0	108	85	91	85	78	100	160	165	160	105	53	20.96	7.95
Florida.....	14.7	15.0	16.0	15.0	13.5	14.0	98	79	82	80	73	90	140	138	140	100	53	18.22	7.42
Ohio.....	40.3	38.0	36.0	43.0	43.0	44.0	81	45	63	61	56	90	136	130	121	68	41	41.67	16.81
Indiana.....	36.5	36.0	33.0	37.0	40.0	36.0	76	42	60	58	51	84	125	119	125	59	37	36.60	13.92
Illinois.....	35.6	38.0	35.0	36.0	34.0	34.0	76	41	63	61	54	81	110	120	130	59	38	35.28	12.92
Michigan.....	33.3	21.5	30.0	37.0	39.0	39.0	93	57	67	67	68	95	182	130	138	82	48	37.46	18.72
Wisconsin.....	39.3	22.0	40.0	45.0	43.0	46.2	88	51	60	65	68	92	163	130	125	77	46	42.15	21.25
Minnesota.....	37.7	30.0	40.0	40.0	37.5	41.0	71	37	53	52	62	80	110	111	120	51	31	34.26	12.71
Iowa.....	40.7	37.0	36.0	41.0	46.0	43.0	71	35	60	55	51	80	108	122	120	47	30	38.92	12.90
Missouri.....	28.8	35.0	20.0	27.0	32.0	30.0	83	46	74	68	57	90	114	143	138	64	40	28.76	12.00
North Dakota.....	22.6	9.0	19.0	33.0	24.0	28.0	83	43	52	58	67	81	151	130	140	72	34	24.81	9.52
South Dakota.....	30.5	28.0	34.0	23.5	30.0	32.0	69	37	56	50	49	77	120	110	119	42	26	27.89	8.32
Nebraska.....	26.5	27.0	17.0	23.0	23.8	28.0	72	37	65	53	47	78	120	128	122	41	27	24.23	7.66
Kansas.....	16.8	13.0	7.0	11.5	2.6	22.2	81	40	78	63	51	90	125	149	140	44	31	13.75	6.88
Kentucky.....	27.5	31.5	26.0	24.0	30.5	25.6	90	55	76	64	56	87	121	146	155	82	55	32.53	14.08
Tennessee.....	25.6	29.0	24.0	21.4	28.0	25.8	92	61	77	68	58	94	120	145	157	87	52	30.40	13.42
Alabama.....	15.3	16.0	14.6	14.5	15.7	15.5	101	79	89	80	69	102	125	148	159	98	62	18.56	9.61
Mississippi.....	17.3	20.5	17.0	15.0	16.0	13.0	99	71	77	73	65	98	138	151	160	102	56	21.60	10.08
Louisiana.....	18.0	18.0	16.0	17.5	19.2	19.5	98	68	77	75	64	94	146	161	150	85	65	22.87	12.68
Texas.....	20.4	11.0	10.0	30.0	26.0	25.2	98	64	82	74	58	104	167	176	118	84	54	22.59	13.61
Oklahoma.....	18.6	8.5	7.5	24.0	28.0	25.0	84	41	72	64	46	93	147	164	127	54	32	16.59	8.00
Arkansas.....	20.1	24.0	13.0	18.0	23.4	22.0	102	67	78	80	64	98	140	180	164	97	57	25.31	12.54
Montana.....	12.5	12.5	21.0	4.0	12.1	11.2	101	70	77	76	69	93	175	135	165	80	67	17.95	8.58
Wyoming.....	21.4	20.0	25.0	16.0	21.0	22.0	96	64	80	70	67	90	175	140	165	56	50	25.93	11.00
Colorado.....	17.5	20.0	17.5	15.0	20.5	14.5	83	50	73	60	55	90	125	135	142	70	31	19.64	4.50
New Mexico.....	22.1	20.0	25.0	21.6	21.7	22.1	114	75	75	80	73	113	188	180	151	110	90	32.56	19.89
Arizona.....	27.0	27.0	28.0	29.0	22.0	29.0	146	100	110	120	115	140	190	210	200	170	100	50.90	29.00
Utah.....	23.7	25.0	28.0	18.2	21.9	21.6	114	75	70	75	80	115	170	181	150	150	76	38.56	18.70
Nevada.....	30.0	30.0	32.0	26.9	32.0	29.1	132	98	118	110	93	125	150	210	140	160	120	48.71	34.62
Idaho.....	34.6	31.0	40.0	32.0	36.0	31.0	103	70	68	72	65	100	155	183	165	100	50	49.01	17.00
Washington.....	37.4	37.0	38.0	36.0	36.0	40.0	114	77	80	73	77	100	162	170	185	125	86	54.63	31.40
Oregon.....	29.7	30.0	31.0	26.5	31.0	30.0	108	75	70	82	82	95	150	155	150	125	84	41.25	25.20
California.....	33.4	32.0	35.0	32.0	33.0	35.0	123	85	88	87	88	124	185	193	179	120	77	52.66	26.95
United States.....	28.1	26.3	24.0	28.9	31.5	29.7	83.7	48.7	69.1	64.4	57.5	88.9	127.9	136.5	134.5	67.0	42.3	29.60	12.54

¹Based upon farm price Dec. 1.

CORN—Continued.

TABLE 10.—Corn: Farm price, cents per bushel, on first of each month, 1908-1921.

Year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Average. ¹
1908.....	54.0	56.0	58.1	61.2	64.7	73.7	75.7	78.1	76.5	72.3	63.5	60.6	63.4
1909.....	60.7	61.4	64.7	67.5	71.9	76.3	77.0	75.2	71.0	67.1	62.2	57.9	65.9
1910.....	62.3	65.2	65.9	65.5	63.5	65.2	66.2	67.3	66.3	61.1	52.6	48.0	62.1
1911.....	48.2	49.0	48.9	49.7	51.8	55.1	60.0	55.9	65.9	65.7	64.7	61.8	55.3
1912.....	62.2	64.6	66.6	71.1	79.4	82.5	81.1	79.3	77.6	70.2	58.4	48.7	67.6
1913.....	48.9	50.6	52.2	53.7	56.8	60.6	63.2	65.4	75.4	75.3	70.7	69.1	59.4
1914.....	63.6	68.3	69.1	70.7	72.1	75.0	75.5	76.8	81.5	78.2	70.6	64.4	71.4
1915.....	66.2	72.8	75.1	75.1	77.7	77.9	77.7	78.9	77.3	70.5	61.9	57.5	71.2
1916.....	62.1	66.7	68.2	70.3	72.3	74.1	75.4	79.4	83.6	82.3	85.0	83.9	73.8
1917.....	90.0	95.8	100.9	113.4	150.6	160.1	164.6	196.6	175.5	175.1	146.0	127.9	129.2
1918.....	134.8	138.8	154.3	153.6	155.7	152.5	153.7	159.7	165.7	159.5	140.3	136.5	147.3
1919.....	144.7	138.1	137.2	149.6	162.6	171.2	176.5	191.2	185.4	153.9	133.4	134.5	151.5
1920.....	140.4	146.8	143.5	158.6	169.6	185.2	187.6	163.7	155.7	121.3	87.3	67.0	140.4
1921.....	66.7	62.4	64.5	63.0	59.5	62.5	62.2	61.7	56.2	51.0	41.1	42.3	58.6
Average 1912-1921..	88.5	90.5	93.7	97.9	105.6	110.2	111.6	115.3	113.4	103.7	89.5	83.7	97.0

¹ Weighted average.

TABLE 11.—Corn: Monthly marketings by farmers, 1916-1921.

Month.	Estimated amount sold monthly by farmers of United States (millions of bushels).						Per cent of year's sales.					
	1916-17	1917-18	1918-19	1919-20	1920-21	5-yr. aver.	1916-17	1917-18	1918-19	1919-20	1920-21	5-yr. aver.
July.....	30	34	27	20	35	29	6.2	5.3	6.7	4.5	5.4	5.6
August.....	34	26	28	25	36	30	7.1	4.0	6.8	5.6	5.6	5.8
September.....	28	22	35	21	45	30	5.9	3.4	8.4	4.9	6.9	5.9
October.....	25	24	27	25	35	27	5.3	3.8	6.7	5.6	5.3	5.3
November.....	67	56	30	40	46	48	14.0	8.8	7.3	9.2	7.1	9.3
December.....	60	78	49	66	74	65	12.5	12.2	12.1	15.0	11.3	12.6
January.....	73	91	61	57	93	75	15.1	14.2	15.0	12.9	14.3	14.3
February.....	43	103	30	42	76	59	9.0	16.1	7.2	9.5	11.7	10.7
March.....	34	88	31	38	58	50	7.0	13.7	7.5	8.7	8.9	9.2
April.....	26	45	34	26	36	33	5.4	7.1	8.2	5.9	5.6	6.4
May.....	31	36	33	33	55	38	6.5	5.6	8.0	7.6	8.5	7.3
June.....	29	37	25	47	61	40	6.0	5.8	6.1	10.6	9.4	7.6
Season....	480	640	410	440	650	524	100.0	100.0	100.0	100.0	100.0	100.0

CORN—Continued.

TABLE 12.—*Corn: Extent and causes of yearly crop losses, 1909–1920.*

Year.	Deficient moisture	Excessive moisture.	Floods.	Frost or freeze.	Hail.	Hot winds.	Storms.	Total climatic.	Plant disease.	Insect pests.	Animal pests.	Defective seed.	Total.
	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
1920.....	5.4	3.3	0.6	0.7	0.5	0.3	0.4	11.2	0.3	3.6	0.1	0.3	15.9
1919.....	10.8	7.3	1.4	1.1	.3	1.0	.4	21.4	.4	2.1	.1	.3	25.4
1918.....	22.1	.9	.5	2.0	.4	6.3	.3	32.3	.3	2.6	.1	1.3	37.7
1917.....	12.1	2.9	.6	13.5	.6	1.2	.3	31.6	.3	1.4	.1	.3	33.8
1916.....	18.5	5.8	1.7	1.7	.4	1.7	1.1	31.3	.3	2.0	.1	.6	34.7
1915.....	3.0	11.9	2.1	6.9	.3	.2	1.1	26.5	.3	2.1	.1	.2	29.9
1914.....	20.8	1.3	.4	.4	.5	2.1	.4	26.1	.1	3.6	.1	.3	30.6
1913.....	27.1	1.2	.4	1.0	.3	3.1	.4	33.7	.1	3.7	.2	.4	38.9
1912.....	8.7	4.6	.9	1.7	.5	1.0	.3	18.1	.3	4.8	.3	2.3	26.3
1911.....	23.4	1.6	(1)	.4	.2	3.4	.1	29.6	.3	2.3	.2	.4	33.7
1910.....	13.9	3.0	.8	.9	.4	1.6	.5	21.3	.3	2.3	.4	1.2	26.0
1909.....	13.0	7.3	1.5	1.0	.5	1.6	.7	25.8	.2	2.3	.4	.3	29.6
Average.....	14.9	4.3	.9	2.5	.4	2.0	.5	25.8	.2	2.8	.2	.6	30.2

¹ Less than 0.05 per cent.TABLE 13.—*Corn: Monthly and yearly average price per bushel of reported sales, No. 3 yellow, 1900–01 to 1921–22.*CHICAGO.¹

Crop year.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	Weighted average.
1900–1901.....	\$0.37	\$0.35	\$0.36	\$0.37	\$0.39	\$0.42	\$0.43	\$0.42	\$0.48	\$0.56	\$0.56	\$0.56	\$0.43
1901–2.....	.60	.64	.62	.59	.59	.62	.62	.63	.65	.60	.59	.60	.62
1902–3.....	.53	.46	.43	.43	.41	.41	.46	.49	.51	.53	.51	.45	.47
1903–4.....	.44	.44	.43	.46	.46	.49	.49	.50	.49	.52	.53	.55	.49
1904–5.....	.48	.43	.42	.44	.47	.48	.50	.55	.57	.54	.53	.53	.48
1905–6.....	.45	.42	.42	.42	.40	.42	.47	.49	.52	.54	.47	.46	.44
1906–7.....	.43	.42	.41	.43	.43	.44	.52	.53	.54	.57	.64	.65	.50
1907–8.....	.59	.58	.53	.54	.63	.65	.73	.72	.76	.81	.80	.77	.68
1908–9.....	.63	.59	.64	.65	.66	.69	.73	.75	.72	.70	.69	.59	.65
1909–10.....	.59	.59	.64	.63	.61	.57	.60	.59	.62	.64	.58	.50	.59
1910–11.....	.49	.45	.45	.45	.45	.50	.54	.55	.63	.65	.67	.73	.53
1911–12.....	.68	.61	.62	.64	.63	.78	.79	.75	.68	.79	.74	.65	.71
1912–13.....	.52	.46	.46	.48	.49	.55	.57	.60	.62	.74	.75	.70	.53
1913–14.....	.72	.66	.62	.62	.64	.67	.70	.72	.71	.82	.79	.73	.70
1914–15.....	.67	.64	.71	.74	.72	.75	.77	.74	.78	.81	.74	.65	.70
1915–16.....	.63	.69	.74	.74	.73	.76	.75	.74	.81	.85	.86	.96	.79
1916–17.....	.98	.92	.98	1.00	1.09	1.40	1.59	1.70	1.99	2.06	2.10	2.03	1.11
1917–18.....	2.21	1.77	1.77	1.81	1.70	1.65	1.60	1.62	1.70	1.72	1.58	1.41	1.63
1918–19.....	1.33	1.45	1.43	1.27	1.53	1.62	1.74	1.78	1.92	1.95	1.55	1.41	1.62
1919–20.....	1.46	1.47	1.51	1.46	1.58	1.69	2.02	1.89	1.58	1.58	1.31	.91	1.59
1920–21.....	.77	.74	.65	.63	.62	.57	.60	.63	.60	.56	.53	.45	.62
1921–22.....	.47	.47	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21-year average.	.74	.70	.70	.70	.72	.76	.82	.82	.85	.88	.83	.77	.75

¹ Compiled from Chicago Daily Trade Bulletin.

Statistics of Corn.

515

CORN—Continued.

TABLE 13.—*Corn: Monthly and yearly average price per bushel of reported sales, No. 3 yellow, 1900-01 to 1921-22—Continued.*

KANSAS CITY.¹

Crop year.	November	December	January	February	March	April	May	June	July	August	September	October	Weighted average.
1910-11.....	\$0.47	\$0.43	\$0.44	\$0.42	\$0.44	\$0.47	\$0.52	\$0.55	\$0.67	\$0.62	\$0.66	\$0.71	\$0.49
1911-12.....	.67	.62	.66	.65	.71	.81	.80	.75	.75	.76	.71	.64	.69
1912-13.....	.45	.45	.47	.47	.50	.56	.58	.59	.62	.75	.75	.72	.55
1913-14.....	.72	.66	.65	.63	.66	.69	.73	.71	.70	.81	.78	.70	.67
1914-15.....	.61	.65	.73	.73	.71	.75	.75	.74	.76	.76	.70	.59	.72
1915-16.....	.62	.67	.70	.71	.68	.72	.72	.72	.78	.82	.84	.91	.69
1916-17.....	.95	.89	.95	.99	1.16	1.41	1.58	1.68	2.01	1.73	1.96	1.91	1.06
1917-18.....	2.02	1.66	1.65	1.74	1.66	1.59	1.61	1.54	1.63	1.76	1.66	1.45	1.63
1918-19.....	1.47	1.52	1.42	1.34	1.48	1.66	1.74	1.79	1.92	1.93	1.64	1.42	1.56
1919-20.....	1.51	1.51	1.49	1.45	1.56	1.71	1.91	1.82	1.58	1.57	1.28	.88	1.60
1920-21.....	.67	.69	.60	.58	.57	.52	.56	.56	.51	.46	.49	.38	.59
1921-22.....	.43	.42											
11-year average.	.92	.89	.89	.88	.92	.99	1.04	1.04	1.08	1.09	1.04	.94	.93

OMAHA.²

1917-18.....	\$1.88	\$1.58	\$1.61	\$1.67	\$1.63	\$1.36	\$1.60	\$1.53	\$1.60	\$1.73	\$1.61	\$1.41	\$1.53
1918-19.....	1.42	1.45	1.45	1.31	1.48	1.62	1.68	1.72	1.88	1.85	1.50	1.38	1.57
1919-20.....	1.48	1.44	1.49	1.29	1.53	1.65	1.86	1.77	1.51	1.50	1.19	.84	1.61
1920-21.....	.69	.64	.57	.54	.53	.48	.52	.51	.50	.46	.42	.37	.54
1921-22.....	.40	.39											

ST. LOUIS.⁴

1909-10.....	\$0.58	\$0.61	\$0.65	\$0.63	\$0.60	\$0.58	\$0.62	\$0.59	\$0.63	\$0.62	\$0.55	\$0.49	\$0.61
1910-11.....	.47	.44	.45	.44	.45	.48	.53	.55	.65	.63	.66	.72	.48
1911-12.....	.65	.61	.60	.64	.70	.80	.79	.74	.74	.76	.73	.64	.70
1912-13.....	.48	.46	.48	.48	.50	.57	.58	.60	.64	.73	.75	.71	.52
1913-14.....	.73	.67	.63	.62	.66	.68	.71	.71	.73	.83	.79	.72	.68
1914-15.....	.66	.65	.72	.74	.72	.76	.77	.74	.78	.78	.74	.64	.72
1915-16.....	.64	.68	.75	.75	.73	.75	.74	.74	.81	.86	.86	.93	.75
1916-17.....	.96	.91	.98	.99	1.12	1.45	1.63	1.67	1.94	1.75	2.04	1.91	1.11
1917-18.....	2.00	1.75	1.76	1.82	1.68	1.66	1.62	1.60	1.69	1.75	1.68	1.45	1.67
1918-19.....	1.40	1.50	1.44	1.33	1.54	1.62	1.74	1.78	1.90	1.93	1.52	1.42	1.59
1919-20.....	1.49	1.49	1.51	1.48	1.60	1.73	2.00	1.87	1.62	1.57	1.30	.92	1.64
1920-21.....	.79	.74	.64	.63	.62	.57	.62	.61	.59	.54	.52	.46	.60
1921-22.....	.47	.48											
12-year average.	.90	.88	.88	.88	.91	.97	1.03	1.02	1.07	1.06	1.00	.92	.92

MINNEAPOLIS.⁶

1909-10.....	\$0.60	\$0.60	\$0.61	\$0.59	\$0.57	\$0.54	\$0.57	\$0.54	\$0.60	\$0.60	\$0.54	\$0.49	\$0.56
1910-11.....	.49	.43	.44	.43	.43	.48	.52	.53	.64	.62	.61	.70	.50
1911-12.....	.69	.58	.62	.64	.68	.79	.76	.72	.74	.71	.72	.66	.70
1912-13.....	.50	.42	.43	.44	.47	.53	.59	.57	.59	.73	.71	.66	.53
1913-14.....	.65	.61	.58	.57	.60	.64	.68	.67	.70	.77	.76	.67	.62
1914-15.....	.61	.60	.68	.72	.69	.71	.72	.69	.77	.79	.74	.66	.67
1915-16.....	.68	.75	.77	.77	.74	.76	.76	.74	.82	.85	.84	.93	.79
1916-17.....	.91	.87	.95	1.00	1.07	1.34	1.58	1.64	1.93	1.96	2.15	1.80	1.06
1917-18.....	2.10	1.69	1.73	1.85	1.76	1.60	1.61	1.51	1.62	1.75	1.61	1.37	1.63
1918-19.....	1.39	1.46	1.45	1.24	1.44	1.65	1.69	1.68	1.86	1.88	1.53	1.37	1.57
1919-20.....	1.48	1.49	1.45	1.43	1.57	1.66	1.98	1.73	1.52	1.48	1.26	.90	1.62
1920-21.....	.76	.69	.59	.54	.55	.51	.53	.54	.49	.53	.49	.38	.59
1921-22.....	.42	.40											
12-year average.	.89	.85	.86	.85	.88	.93	1.00	.97	1.02	1.06	1.00	.88	.90

¹ Compiled from Kansas City Daily Price Current and Grain Market Review.

² Compiled from Omaha Daily Price Current.

⁴ Compiled from St. Louis Daily Market Reporter.

⁶ Compiled from the Minneapolis Daily Market Record.

CORN—Continued.

TABLE 14.—*Corn: Monthly and yearly receipts and shipments, 1910-11 to 1921-22.*

[In thousands of bushels; 1 c, 100 omitted.]

Crop year.	Chicago.		Milwaukee.		Minneapolis.		Duluth.		St. Louis.		Toledo.		Detroit.		Kansas City.		Peoria.		Omaha.		Indianapolis.		Total.
	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	
1910-11.....	113,808	92,652	7,895	7,635	8,918	5,370	1,687	23,766	15,422	6,236	3,200	3,860	1,940	16,026	13,345	16,171	11,111	(*)	(*)	(*)	1,098,711,152,522		
1911-12.....	108,431	75,940	9,410	6,308	5,423	3,294	12	12,125	176,145	4,922	1,121	2,037	2,857	1,888	19,646	14,971	19,011	11,912	30,817	15,404	13,687	1,017,928,621,149,755	
1912-13.....	131,792	94,311	11,613	7,887	6,283	3,274	492	193,227	762,122	2,957	1,885	2,757	1,910	16,930	10,611	17,924	11,912	32,617	17,732	15,971	3,617,252,177,069,006		
1913-14.....	84,838	57,528	15,804	10,727	10,710	8,776	878	362,161	991,110	1,119	4,500	2,314	2,835	1,639	27,494	19,192	11,724	6,651	57,108	33,040	14,118	5,183,290,079,155,528	
1914-15.....	116,348	80,256	10,609	10,985	14,099	11,997	3,036	3,036	18,626	10,206	4,582	2,594	3,421	16,306	11,906	11,9	16,736	6,811	24,599	23,117	15,087	6,498,257,776,176,465	
1915-16.....	101,328	62,148	9,887	6,943	8,601	3,927	(*)	17,974	8,678	4,656	1,422	4,726	3,190	25,837	22,439	35,918	14,724	21,498	15,948	22,700	11,073,250,309,149,459		
1916-17.....	78,723	40,467	12,755	8,681	9,850	7,779	37	6,317	312	191	2,882	1,100	3,192	12,712	7,743	8,469	31,441	11,870	9,826	26,179	24,421	11,801,226,461,134,088	
1917-18.....	98,786	34,540	12,374	7,006	16,715	9,636	177	170	25,351	16,130	2,609	1,160	4,361	717	11,369	24,181	96,176	17,022	16,158	36,355	20,583	9,206,204,660,156,463	
1918-19.....	61,366	32,019	6,784	3,697	6,621	4,773	6	(*)	19,219	11,956	1,127	519	1,633	945	10,146	10,315	18,511	10,330	21,805	21,197	15,005	7,130,169,123,022,822	
1919-20.....	87,641	37,236	14,632	7,079	9,121	6,384	5	(*)	27,593	15,975	2,122	1,208	1,671	481	11,218	5,011	22,149	17,060	23,227	18,009	19,991	7,170,219,763,116,921	
1920-21.....	167,241	113,374	27,455	21,823	12,066	8,483	4,831	3,777	25,923	17,044	3,194	1,349	1,663	264	11,137	9,712	16,091	9,823	20,012	17,356	17,505	6,353,310,12,200,385	
11-year average.....	104,573	65,318	13,476	9,540	9,622	6,797	1,117	1,194	22,061	13,316	3,533	1,735	3,056	1,613	18,909	13,682	22,328	11,880	26,766	22,303	18,006	7,300,289,477,151,761	

Month.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.
1920.																
November.....	3,901	5,072	834	423	891	367	3	.....	881	623	102	66	151	12	561	212
December.....	6,223	3,379	2,031	627	2,027	1,288	3	.....	1,483	518	382	54	189	25	931	381
1921.																
January.....	21,606	7,026	2,783	1,856	2,128	1,466	44	.....	3,023	2,258	427	161	213	42	1,952	615
February.....	13,657	5,176	1,783	1,575	1,060	881	250	13	2,667	1,613	150	123	83	40	1,428	399
March.....	15,743	10,716	3,071	1,896	1,321	1,102	562	11	3,272	2,365	307	98	165	33	2,414	710
April.....	4,863	6,469	689	1,089	441	542	202	706	1,356	1,168	205	50	90	16	624	588
May.....	9,466	9,223	838	620	510	401	280	588	2,316	1,279	232	124	102	10	979	1,303
June.....	21,322	11,769	3,014	1,991	1,130	824	476	406	1,916	1,695	362	289	111	35	1,747	1,218
July.....	8,951	11,077	2,066	2,222	392	483	491	594	1,639	1,267	149	189	55	8	1,287	1,361
August.....	16,810	13,295	3,820	2,558	522	322	253	94	2,499	1,816	230	56	116	6	904	1,591
September.....	23,406	17,238	3,540	4,463	808	389	1,076	817	1,785	979	344	54	221	14	352	702
October.....	21,200	12,943	2,981	1,930	839	405	1,211	519	2,337	1,431	191	85	108	20	955	596
November.....	7,577	5,987	765	1,533	768	361	419	840	1,818	1,191	227	71	126	48	455	346
December.....	17,512	5,981	3,499	1,384	1,816	1,143	1,376	234	3,413	1,538	447	156	270	47	1,907	1,115

¹ Compiled from Chicago Daily Trade Bulletin and Board of Trade Reports.

² No report.

CORN—Continued.

TABLE 15.—*Corn: Visible supply in United States, first of each month, 1910-11 to 1921-22.*¹

[In thousands of bushels; i. e., 000 omitted.]

Crop year.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.
1910-11.....	3,510	1,545	5,099	9,145	11,794	11,166	7,047	4,685	7,482	7,100	6,724	6,339
1911-12.....	1,703	2,054	5,140	6,900	14,257	15,914	7,490	5,699	8,204	2,451	1,823	3,101
1912-13.....	2,689	1,525	5,879	9,717	17,918	21,494	7,270	2,549	11,479	6,389	2,612	7,308
1913-14.....	6,206	2,026	12,126	16,505	18,374	18,812	9,380	4,409	7,589	3,203	3,923	5,461
1914-15.....	3,114	3,382	19,703	34,156	41,238	32,877	20,203	12,795	5,225	2,306	2,382	3,444
1915-16.....	3,288	4,387	8,919	14,773	24,605	27,697	21,004	14,505	6,870	5,167	3,330	5,033
1916-17.....	2,361	2,677	5,838	10,671	12,931	11,974	7,173	2,629	3,277	2,841	2,371	1,163
1917-18.....	1,277	1,932	3,155	4,623	8,939	19,016	16,111	13,038	11,487	9,466	5,232	5,503
1918-19.....	4,733	2,216	2,415	5,549	4,483	2,514	4,245	2,600	4,038	2,461	956	2,163
1919-20.....	1,484	1,477	2,921	3,575	4,951	5,069	5,035	2,740	4,364	6,152	2,564	7,587
1920-21.....	10,085	4,597	5,409	14,297	22,333	32,896	23,018	15,103	24,304	14,584	11,500	11,765
1921-22.....	18,935	15,518										

¹ Compiled from Chicago Daily Trade Bulletin.TABLE 16.—*Corn: Summary in per cent of carloads graded by licensed inspectors for yearly periods, all inspection points. Total of all classes and subclasses under each grade.*

1917-18 TO 1920-21.

Crop year.	Receipts.							Shipments.						
	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	S. G.	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	S. G.
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
1917-18.....	0.7	5.9	18.5	17.3	13.8	13.5	30.3	0.3	7.2	34.3	19.8	8.1	10.1	20.2
1918-19.....	6.5	17.9	21.0	21.4	14.8	8.3	10.1	2.2	27.6	37.6	15.0	5.3	5.3	7.0
1919-20.....	12.9	21.7	17.5	25.6	12.3	4.0	6.0	5.8	38.5	30.1	15.1	4.9	2.3	3.3
1920-21.....	21.2	27.4	19.8	19.5	6.5	2.9	2.7	14.2	57.9	20.4	4.4	0.7	1.1	1.3

NOVEMBER, 1920, TO OCTOBER, 1921.

White.....	24.3	33.2	20.0	14.3	3.9	2.1	2.2	10.9	68.6	15.0	3.8	0.4	0.8	0.5
Yellow.....	25.2	25.3	16.1	21.3	7.3	2.8	2.0	21.7	50.2	20.4	5.5	0.7	0.8	0.7
Mixed.....	12.1	27.0	26.2	19.7	6.9	3.8	4.3	8.4	61.7	22.0	3.7	0.9	1.3	2.0

CORN—Continued.

TABLE 17.—Corn (including meal): International trade, calendar years 1909–1920.¹[The item *maicena* or *maizena* is included as "Corn and corn meal."]

GENERAL NOTE.—Substantially the international trade of the world. It should not be expected that the world export and import totals for any year will agree. Among sources of disagreement are these: (1) Different periods of time covered in the "year" of the various countries; (2) imports received in year subsequent to year of export; (3) want of uniformity in classification of goods among countries; (4) different practices and varying degrees of failure in recording countries of origin and ultimate destination; (5) different practices of recording reexported goods; (6) opposite methods of treating free ports; (7) clerical errors, which, it may be assumed, are not infrequent.

The exports given are domestic exports, and the imports given are imports for consumption as far as it is feasible and consistent so to express the facts. While there are some inevitable omissions, on the other hand there are some duplications because of reshipments that do not appear as such in official reports. For the United Kingdom, import figures refer to imports for consumption, when available; otherwise total imports, less exports, of "foreign and colonial merchandise." Figures for the United States include Alaska, Porto Rico, and Hawaii.

Country.	Average, 1909–1913		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORTING COUNTRIES.								
Argentina.....	2 <i>1,000 bushels.</i>	115,749 <i>1,000 bushels.</i>	(²)	26,171 <i>1,000 bushels.</i>	1	97,851 <i>1,000 bushels.</i>		
British South Africa.....	257	4,115	56	13,507	184	13,582	637	5,149
Bulgaria.....	44	9,307						4,185
Rumania.....	176	38,966			596	26		16,943
Russia.....	335	30,034						
United States.....	1,226	45,034	1,990	47,059	11,213	16,002	7,784	21,230
Uruguay.....	5	201	178	6		10		(¹)
PRINCIPAL IMPORTING COUNTRIES.								
Austria-Hungary.....	13,877	268						³ 38
Belgium.....	25,801	8,130			1,483	675	4,882	2,327
Canada.....	10,629	25	11,757	48	6,459	229	10,793	113
Cuba.....	2,746	(²)	1,672		2,308			
Denmark.....	11,440	6	105		7,781	1	9,822	4
Egypt.....	471	61	5	48	5	3	950	(²)
France.....	18,708	82	6,812	12	6,921	61	17,609	858
Germany.....	32,160	1					16,069	(²)
Italy.....	14,895	206	10,836	(²)	8,232	(²)	12,599	4
Mexico.....	4,404	82	3,039					
Netherlands.....	29,580	8,750	346		9,635	38	15,566	37
Norway.....	1,079		2,531		2,814		2,574	
Portugal.....	1,674	5	533	(²)	1,610	(²)		
Spain.....	9,775	44	383	68	2,509	483	7,719	188
Sweden.....	1,476	26	1,374		3,199	15	1,519	
Switzerland.....	3,987	1	652		5,274		963	(²)
United Kingdom.....	82,976	96	32,275	3	38,986	17	71,057	67
Other countries.....	3,268	9,817	1,027	5,198	871	3,080	2,305	5,319
Total.....	270,991	271,026	75,591	92,120	110,084	132,073	182,878	56,462

¹ Does not include statistics of trade for Austria-Hungary, Belgium, and Germany during the war period, 1914–1918. Therefore the total trade statistics of imports and exports for all countries are not strictly comparable during that period.

² Less than 500.

³ Austria only, new boundaries.

WHEAT.

TABLE 18.—Wheat: Area and production in undermentioned countries, 1909–1921.

Country.	Area.				Production.			
	Average, 1909–1913. ¹	1919	1920	1921	Average, 1909–1913. ¹	1919	1920	1921
NORTH AMERICA.	1,000 acres.	1,000 acres.	1,000 acres.	1,000 acres.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.
United States.....	47,097	75,694	61,143	62,408	967,979	968,279	833,027	794,593
Canada:								
Quebec.....	70	251	222	181	1,168	4,206	3,775	2,754
Ontario.....	850	981	1,030	774	18,633	20,698	22,973	15,375
Manitoba.....	2,861	2,850	2,706	3,501	53,174	40,975	57,542	59,054
Saskatchewan.....	4,894	10,587	10,061	13,557	97,954	89,904	113,135	188,060
Alberta.....	1,201	4,283	4,074	5,123	24,783	34,575	83,461	53,044
Other.....	69	144	139	125	1,407	2,812	2,303	2,430
Total Canada..	9,945	19,126	18,232	23,261	197,119	193,260	263,189	300,857
Mexico.....	2,628	.....	.....	.....	9,995	² 14,239	² 14,951	.....
Total North America.....	59,670	.....	.....	.....	893,805	1,175,478	1,111,167	.....
SOUTH AMERICA.								
Argentina.....	15,799	16,976	14,958	14,816	157,347	171,591	214,143	169,756
Chile.....	1,021	1,313	.....	1,152	20,316	21,591	21,591	25,180
Uruguay.....	734	840	681	700	7,314	6,890	5,948	7,768
Total South America.....	17,554	19,129	.....	16,668	184,977	200,072	241,682	202,704
EUROPE.								
Austria.....	³ 3,011	371	371	378	³ 61,075	5,114	5,424	6,452
Belgium.....	395	343	306	353	14,583	9,895	10,275	11,523
Bulgaria.....	² 2,764	2,080	2,131	2,361	² 43,725	34,028	39,705	42,510
Czechoslovakia.....	.....	⁴ 842	1,566	1,538	.....	⁵ 15,369	26,362	40,673
Denmark.....	123	128	180	220	4,916	5,923	6,945	.....
Finland.....	.....	19	19	20	129	306	272	250
France.....	³ 16,308	11,633	12,586	13,170	³ 317,254	187,094	236,929	322,767
Germany.....	⁴ 4,768	3,209	3,413	3,562	³ 152,119	79,701	82,858	97,864
Greece.....	⁶ 863	936	1,399	988	⁶ 7,200	9,693	12,194	11,170
Hungary.....	⁸ 8,284	.....	2,662	2,697	⁸ 156,523	.....	38,294	47,087
Italy.....	11,746	10,593	11,290	11,789	183,260	169,769	141,337	188,126
Luxembourg.....	27	26	27	27	615	.....	449	661
Netherlands.....	138	168	152	176	4,976	6,015	5,766	8,686
Norway.....	12	41	40	40	307	1,071	999	941
Poland.....	¹ 1,260	⁷ 1,064	1,791	2,082	² 23,343	⁷ 22,156	22,741	35,576
Portugal.....	1,180	999	.....	.....	8,683	.....	7,140	.....
Russia proper.....	⁵ 50,388	.....	.....	.....	⁵ 522,794	.....	.....	.....
Rumania.....	⁴ 4,576	⁸ 4,271	5,007	5,904	⁸ 86,679	⁹ 66,060	70,350	76,977
Serbia.....	³ 874	.....	.....	.....	² 14,775	.....	.....	.....
Spain.....	9,547	10,378	10,255	10,350	130,446	129,250	138,606	143,205
Sweden.....	255	348	360	360	7,907	9,509	10,545	12,566
Switzerland.....	156	130	119	117	3,314	3,524	3,584	3,574
United Kingdom:								
England.....	1,748	2,150	1,824	1,937	56,411	61,824	52,120	68,688
Wales.....	44	71	51	39	1,117	1,984	1,232	1,096
Scotland.....	52	80	54	45	2,345	3,064	2,080	2,568
Ireland.....	43	70	50	43	1,608	2,452	1,402	² 1,443
Total United Kingdom.....	1,887	2,371	1,979	2,084	61,481	69,324	56,834	73,800
Yugoslavia.....	.....	3,380	3,951	.....	.....	50,956	64,710	.....
Total Europe.....	118,567	.....	.....	.....	1,806,104	.....	.....	.....
ASIA.								
British India ¹⁰	29,114	23,798	29,949	25,722	350,736	280,485	377,888	250,469
Cyprus.....	.....	.....	.....	.....	2,286	² 1,861	² 3,000	.....

¹ Five-year average, except in a few cases where five-year statistics were unavailable.² Unofficial.³ Old boundaries.⁴ Bohemia and Moravia only.⁵ Bohemia, Moravia, and Silesia.⁶ 1914.⁷ Former Russian Poland, Eastern and Western Galicia and Posen.⁸ Former Kingdom, Bessarabia, and Rukowina.⁹ Excludes Transylvania.¹⁰ Includes some native states.

WHEAT—Continued.

TABLE 18.—Wheat: Area and production in undermentioned countries. 1909-1921.—Con.

Country.	Area.				Production.			
	Average, 1909-1913.	1919	1920	1921	Average, 1909-1913.	1919	1920	1921
ASIA—continued.								
Japanese Empire:	1,000 acres.	1,000 acres.	1,000 acres.	1,000 acres.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.
Japan.....	1,179	1,344	1,300		25,274	32,562	25,288	27,874
Formosa.....	14				173			
Chosen.....	369				4,871	7,144		
Persia.....					16,000			
Russia (Asiatic).....	9,784				84,139			
Turkey (Asiatic).....					35,000			
Total Asia.....	40,440				518,479			
AFRICA.								
Algeria.....	3,371	2,800	2,648	2,816	33,071	25,559	8,561	41,480
Egypt.....	1,311	1,324	1,190	1,458	34,000	30,137	31,711	37,011
Morocco, French.....		1,551	1,997	1,468		16,391	21,999	1,466
Tunis.....	1,193	1,408	1,343	1,500	6,063	7,349	5,225	8,818
Union of South Africa.....		95	800	823	4,620	8,338	5,488	8,113
Total Africa.....	5,875	8,036	7,978	8,065	77,754	87,774	72,984	112,888
AUSTRALASIA.								
Australia:								
Queensland.....	95	22	46	178	1,250	104	312	4,174
New South Wales.....	2,025	2,410	1,474	3,124	26,717	18,825	4,888	53,716
Victoria.....	2,105	2,214	1,918	2,296	27,656	25,240	14,858	39,469
South Australia.....	1,993	2,186	1,927	2,164	22,843	22,937	14,980	34,237
Western Australia.....	544	1,145	1,042	1,255	5,671	8,845	11,223	12,177
Tasmania.....	36	12	12	22	806	187	214	418
Other.....		1					1	
Total Australia.....	6,798	7,990	6,419	9,037	84,943	75,638	45,976	144,191
New Zealand.....	258	208	140	220	7,885	6,568	4,560	6,872
Total Australasia.....	7,056	8,198	6,559	9,257	92,828	82,206	50,536	151,063
Grand total.....	249,162				3,573,947			

TABLE 19.—Wheat: World production so far as reported, 1891-1921.

Year.	Production.	Year.	Production.	Year.	Production.	Year.	Production.
	<i>Bushels.</i>		<i>Bushels.</i>		<i>Bushels.</i>		<i>Bushels.</i>
1891.....	2,432,322,000	1899.....	2,783,885,000	1907.....	3,133,965,000	1915.....	4,198,782,000
1892.....	2,481,805,000	1900.....	2,610,751,000	1908.....	3,182,105,000	1916.....	2,608,545,000
1893.....	2,539,174,000	1901.....	2,955,975,000	1909.....	3,581,519,000	1917.....	2,287,889,000
1894.....	2,660,577,000	1902.....	3,090,116,000	1910.....	3,575,055,000	1918.....	2,803,616,000
1895.....	2,593,312,000	1903.....	3,189,813,000	1911.....	3,551,795,000	1919.....	2,742,339,000
1896.....	2,506,320,000	1904.....	3,165,542,000	1912.....	3,791,951,000	1920.....	2,867,864,000
1897.....	2,238,268,000	1905.....	3,327,084,000	1913.....	4,127,437,000	1921.....	2,965,186,000
1898.....	2,948,305,000	1906.....	3,434,354,000	1914.....	3,585,916,000		

WHEAT—Continued.

TABLE 20.—Wheat: Average yield per acre in undermentioned countries, 1890-1921.

Year.	United States.	Russia (Euro-pean).	Ger-many.	Austria.	Hungary Proper.	France.	United King-dom.
Average:	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1890-1899.....	13.2	8.9	24.5	16.2	.....	¹ 18.6	¹ 31.2
1900-1909.....	14.1	9.7	28.9	18.0	.....	¹ 20.5	¹ 33.1
1910-1919.....	14.8	² 10.5	28.8	17.7	³ 18.6	17.9	31.9
1919.....	12.8	.....	24.8	13.8	.....	16.1	29.2
1920.....	13.6	.....	24.3	14.6	14.4	18.8	28.7
1921.....	12.7	.....	27.5	17.1	17.5	24.5	35.4

¹ Winchester bushels.² 7-year average.³ 6-year average.

TABLE 21.—Wheat: Acreage, production, value, exports, etc., in the United States, 1849-1921.

[See headnote of Table 4.]

Year.	Acre- age har- vested (000 om- itted).	Average yield per acre.	Produc- tion (000 omitted).	Average farm price per bushel Dec. 1.	Farm value Dec. 1 (000 omitted)	Chicago cash price per bushel, No. 1 northern spring.				Domestic exports, including flour, fiscal year beginning July 1.	Imports, including flour, fiscal year beginning July 1.	Per cent of crop ex- ported.
						Decem- ber		Follow- ing Mar. y.				
						Low.	High.	Low.	High.			
	Acres.	Bush.	Bushels.	Cents.	Dollars.	Cts.	Cts.	Cts.	Cts.	Bushels.	Bushels.	P. ct.
1849.....			100,486							7,535,901		7.5
1859.....			178,106							17,213,133	1,665,791	9.9
1866-1875.....	20,470	12.0	244,672	105.3	257,587	95	105	110	125	50,534,641	1,749,128	20.7
1876-1885.....	34,433	12.3	424,708	92.0	390,738	97	104	101	114	127,468,781	711,806	30.0
1886-1895.....	37,500	12.7	476,788	67.3	321,071	74	80	75	86	143,076,110	992,754	30.0
1899.....	43,916	12.4	544,193	71.7	390,346	74½	83½	68½	97½	145,124,972	1,544,242	33.9
1897.....	46,046	13.3	610,254	80.9	493,083	92	109	117	185	217,306,005	2,058,938	41.0
1898.....	51,007	15.1	772,163	58.2	449,022	62½	70	68½	79½	222,618,420	1,875,173	33.0
1899.....	62,539	12.1	636,051	58.6	372,952	64	69½	63½	67½	180,096,762	320,194	34.0
1900.....	51,387	11.7	602,708	62.0	373,578	69½	74½	70	75½	215,990,073	603,101	41.4
1901.....	52,473	15.0	789,538	62.6	494,096	73	79½	72½	76½	234,772,516	120,502	31.4
1902.....	49,649	14.6	724,528	63.0	456,530	71½	77½	74½	80½	202,905,598	1,080,128	30.3
1903.....	51,632	12.9	664,543	69.5	461,605	77	87	87½	101½	120,727,613	217,682	18.9
1904.....	47,825	12.5	596,375	92.4	551,128	115	122	89½	113½	44,112,610	3,286,189	8.0
1905.....	49,389	14.7	726,384	74.6	542,119	82½	90	80½	87½	97,608,007	261,908	14.1
1906.....	47,800	15.8	757,195	66.2	501,355	.....	.....	84	106	146,700,425	590,092	20.0
1907.....	45,116	14.1	637,981	86.5	552,074	.....	.....	.....	.....	163,043,669	519,785	25.7
1908.....	45,970	14.0	644,656	92.2	594,092	106½	112	120½	137½	114,238,468	456,940	17.2
1909.....	44,462	15.8	700,434	98.4	689,108	106	119½	100	119½	87,364,318	815,617	12.8
1910.....	45,681	13.9	635,121	88.3	561,051	104	110	98	106	69,311,760	1,146,558	10.9
1911.....	49,543	12.5	621,338	87.4	543,063	105	110	115	122	79,689,404	3,413,626	12.8
1912.....	45,814	15.9	730,267	76.0	555,280	85	90½	90½	96	142,879,566	1,282,039	19.6
1913.....	50,184	15.2	763,380	79.9	610,122	89½	93	96	100	145,590,349	2,383,537	19.1
1914.....	53,541	16.6	891,017	98.6	878,680	115	131	141	164½	332,464,975	715,369	37.3
1915.....	60,469	17.0	1,025,801	91.9	942,303	106	128½	116	126	243,117,026	7,187,650	23.7
1916.....	52,316	12.2	636,318	160.3	1,019,908	153½	190	258	340	203,573,928	24,924,983	32.0
1917.....	45,089	14.1	636,655	200.8	1,278,112	220	220	220	220	132,578,633	31,215,213	20.8
1918.....	59,181	15.6	921,438	204.2	1,881,826	220	220	245	280	287,401,579	11,238,501	31.2
1919.....	75,694	12.8	967,979	214.9	2,080,056	280	325	295	345	219,864,548	5,495,516	22.7
1920.....	61,143	13.6	833,027	143.7	1,197,263	164	187	142	178	366,092,190	57,398,002	43.9
1921.....	62,408	12.7	794,893	92.7	737,068	118½	118½	.....	.....	.....	.....	.....

¹ Acreage adjusted to census basis.² Preliminary estimate.

Statistics of Wheat.

523

WHEAT—Continued.

TABLE 22.—Wheat: Acreage, production, and total farm value, by States, 1919–1921.

State.	Thousands of acres.			Production (thousands of bushels).			Total value, basis Dec. 1 price (thousands of dollars).		
	1919	1920	1921 ¹	1919	1920	1921 ¹	1919	1920	1921 ¹
Maine.....	14	13	11	263	286	187	579	658	327
Vermont.....	11	11	9	176	209	126	400	418	158
New York.....	464	467	455	9,753	10,203	8,747	20,969	17,856	9,447
New Jersey.....	85	74	81	1,530	1,184	1,539	3,366	2,427	1,739
Pennsylvania.....	1,425	1,368	1,365	24,898	22,700	23,850	53,779	38,590	24,566
Delaware.....	126	116	113	1,512	1,972	1,300	3,221	3,372	1,274
Maryland.....	664	598	568	8,964	10,166	7,952	19,273	16,774	8,191
Virginia.....	991	892	847	11,694	11,150	8,301	26,195	20,070	9,629
West Virginia.....	298	253	230	4,023	3,162	3,125	8,851	6,008	3,656
North Carolina.....	705	680	600	5,570	7,956	4,500	12,978	16,708	6,480
South Carolina.....	125	107	118	1,250	1,177	1,298	3,225	3,001	2,700
Georgia.....	141	124	138	1,480	1,240	1,449	3,892	2,976	2,536
Ohio.....	2,922	2,395	2,314	58,196	30,430	28,697	123,375	50,209	30,993
Indiana.....	2,799	2,080	2,016	41,751	24,960	24,192	87,677	45,683	25,644
Illinois.....	4,103	2,990	2,811	70,170	45,492	45,234	147,357	73,242	45,234
Michigan.....	1,056	1,008	897	20,445	15,383	14,072	42,934	25,844	14,634
Wisconsin.....	561	341	214	7,568	5,162	2,812	16,271	7,934	2,727
Minnesota.....	3,793	2,880	2,582	35,731	28,168	24,943	89,328	36,618	24,194
Iowa.....	1,435	613	579	21,245	10,732	10,102	42,490	15,024	8,890
Missouri.....	4,565	3,012	3,161	61,568	37,653	34,462	128,677	60,245	34,117
North Dakota.....	9,098	8,916	8,827	62,776	80,244	73,264	151,290	104,317	62,274
South Dakota.....	3,896	2,930	2,845	31,793	26,920	25,980	76,903	30,958	22,603
Nebraska.....	4,384	3,593	3,967	60,675	60,480	59,875	122,564	79,229	49,696
Kansas.....	11,624	9,294	10,554	160,276	143,078	128,695	344,594	186,002	119,687
Kentucky.....	840	588	634	9,660	5,998	6,340	20,883	11,456	7,291
Tennessee.....	685	424	450	6,370	4,028	4,500	14,141	7,855	5,400
Alabama.....	34	20	20	306	192	210	750	442	321
Mississippi.....	36	10	6	504	100	84	1,260	213	109
Texas.....	2,435	1,583	2,081	40,178	20,579	20,810	80,856	35,396	20,810
Oklahoma.....	4,718	3,380	3,786	66,052	54,080	47,325	135,407	73,008	40,700
Arkansas.....	256	126	103	2,432	1,197	958	4,913	2,274	958
Montana.....	3,621	2,787	2,297	9,889	28,690	28,168	23,239	36,724	23,943
Wyoming.....	181	196	199	2,613	3,920	3,424	5,540	5,292	2,705
Colorado.....	1,329	1,405	1,719	18,196	25,273	23,239	36,755	34,118	17,662
New Mexico.....	141	195	227	2,676	3,566	3,088	5,352	4,993	3,242
Arizona.....	38	36	40	950	864	840	2,138	2,264	1,050
Utah.....	269	273	276	4,130	5,331	6,299	8,672	8,156	4,725
Nevada.....	22	19	21	466	424	493	997	763	641
Idaho.....	1,142	1,100	1,123	20,775	24,600	27,079	42,589	30,750	19,497
Washington.....	2,495	2,459	2,480	41,888	41,665	54,662	89,640	56,248	47,009
Oregon.....	1,080	1,073	1,067	20,739	22,427	24,317	43,966	29,155	20,669
California.....	1,087	714	557	16,848	9,996	8,355	34,370	17,993	8,940
United States...	75,694	61,143	62,408	967,979	833,027	794,893	2,080,056	1,197,263	737,068

¹ Preliminary estimate.

Yearbook of the Department of Agriculture, 1921.

WHEAT—Continued.

23.—Winter and spring wheat: Acreage (sown and harvested), production, and value Dec. 1, by States in 1921 (preliminary) and United States totals, 1921.

[000 omitted, under acreage, production, and value.]

	Winter wheat.						Spring wheat.				
	Acreage sown in preceding fall.	Acreage harvested.	Average yield per acre.	Production.	Average farm price Dec. 1.	Total farm value Dec. 1.	Acreage.	Average yield per acre.	Production.	Average farm price Dec. 1.	Total farm value Dec. 1.
	<i>Acres.</i>	<i>Acres.</i>	<i>Bush.</i>	<i>Bushels.</i>	<i>Cents.</i>	<i>Dollars.</i>	<i>Acres.</i>	<i>Bush.</i>	<i>Bushels.</i>	<i>Cents.</i>	<i>Dollars.</i>
	11	17.0	187	175	327						
	9	14.0	126	125	158						
	25	14.5	362	108	391						
	15	15.0	225	103	232						
	439	430	19.5	8,385	108	9,056					
	82	81	19.0	1,539	113	1,739					
	1,364	1,350	17.5	23,625	103	24,334					
	116	113	11.5	1,300	98	1,274					
	580	568	14.0	7,952	103	8,191					
	866	847	9.8	8,301	116	9,629					
	254	250	12.5	3,125	117	3,656					
	612	600	7.5	4,500	144	6,480					
	121	118	11.0	1,298	208	2,700					
	143	138	10.5	1,449	175	2,536					
	2,327	2,250	12.4	28,272	108	30,534	34	12.5	425	108	459
	2,074	2,012	12.0	24,144	106	25,593	4	12.0	48	106	51
	2,694	2,632	16.2	42,638	100	42,638	179	14.5	2,596	100	2,596
	879	857	16.0	13,712	104	14,260	40	9.0	360	104	374
	99	89	16.0	1,424	97	1,381	125	11.1	1,388	97	1,346
	99	92	14.0	1,288	97	1,249	2,490	9.5	23,655	97	22,945
	470	465	19.2	8,928	88	7,857	114	10.3	1,174	88	1,033
	3,219	3,155	10.9	34,390	99	34,046	6	12.0	72	99	71
	81	75	14.0	1,050	37	914	8,827	8.3	73,264	85	62,274
	3,839	3,762	15.3	57,559	83	47,774	2,770	9.0	24,930	87	21,689
	11,454	10,538	12.2	128,564	93	119,565	205	11.3	2,316	83	1,922
	687	634	10.0	6,340	115	7,291	16	8.2	131	93	122
	459	450	10.0	4,500	120	5,400					
	21	20	10.5	210	153	321					
	8	6	14.0	84	130	109					
	2,168	2,081	10.0	20,810	100	20,810					
	3,944	3,786	12.5	47,325	86	40,700					
	107	103	9.3	953	100	958					
	403	302	14.0	4,223	85	3,594	1,995	12.0	23,940	85	20,349
	45	41	18.0	738	79	583	158	17.0	2,686	79	2,122
	1,496	1,346	12.0	16,152	76	12,276	373	19.0	7,087	76	5,386
	189	170	12.6	2,142	105	2,249	57	16.6	946	105	998
	44	40	21.0	840	125	1,050					
	156	150	19.9	2,985	75	2,239	126	26.3	3,314	75	2,486
	3	3	20.2	61	130	79	18	24.0	432	130	562
	436	423	24.3	10,279	72	7,401	700	24.0	16,800	72	12,096
	1,360	1,333	28.1	37,457	86	32,213	1,147	15.0	17,205	86	14,796
	813	805	25.0	20,125	85	17,106	262	16.0	4,192	85	3,563
	774	557	15.0	8,355	107	8,940					
U. S.	44,895	42,702	13.7	587,032	95.2	558,725	19,706	10.5	207,861	85.8	178,343
	44,861	40,016	15.3	610,597	148.6	907,291	21,127	10.5	222,430	130.4	289,972
	51,483	50,494	15.1	760,377	210.5	1,600,805	25,200	8.2	207,602	230.9	479,251
	42,301	37,130	15.2	565,099	206.3	1,165,995	22,051	16.2	356,339	200.9	715,831
	40,534	27,257	15.1	412,901	202.8	837,237	17,832	12.5	223,754	197.0	440,575
	39,203	34,709	13.8	480,553	162.7	781,906	17,607	8.8	155,765	152.8	235,062
	42,881	41,308	16.3	673,947	94.7	638,149	19,161	18.4	351,854	86.4	304,154
	37,128	36,008	19.0	684,990	98.6	675,623	17,533	11.8	206,027	98.6	208,057
	33,618	31,699	16.5	523,561	82.9	433,995	18,485	13.0	239,819	73.4	176,127
	33,215	26,571	15.1	399,819	80.9	328,572	19,243	17.2	330,348	70.1	231,708
	32,648	29,162	14.8	430,656	88.0	379,151	20,381	9.4	190,682	86.0	163,912
	31,656	27,329	15.9	434,142	88.1	382,318	18,352	11.0	200,979	88.9	178,733
	31,016	29,019	15.1	437,687	85.4	373,831	17,419	14.0	244,375	80.2	195,890
	31,865	28,887	13.5	390,690	71.8	280,695	17,540	13.4	235,505	64.8	152,628
	25,994	23,886	12.8	305,398	69.0	210,808	15,469	14.5	224,080	56.7	127,072
		24,778	13.1	325,533	69.7	226,911	12,036	12.6	151,145	62.8	94,975

WHEAT—Continued.

TABLE 24.—Wheat: Production and distribution in the United States, 1897-1921.

[000 omitted, under bushels.]

Year.	Stocks in mills and elevators July 1.	Old stock on farms July 1.	Crop.			Total supplies.	Stock on farms Mar. 1 following.	Stocks in mills and elevators Mar. 1.	Shipped out of county where grown.
			Quantity.	Weight per bushel.	Quality.				
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Pounds.</i>	<i>Per cent.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1897-1901.....		37,840	604,653	57.1	87.0	641,998	155,915		325,423
1902-1906.....		40,384	637,705	57.2		698,089	154,531		375,450
1907.....		54,553	634,087	58.2	89.9	688,940	148,721		367,607
1908.....		35,797	664,602	58.3	89.4	698,369	143,632		395,435
1909.....		15,062	683,379	57.9	90.4	698,441	159,100		414,166
1910.....		35,680	635,121	58.5	93.1	670,801	162,705	98,597	352,906
1911.....		34,071	621,338	57.8	88.5	655,409	122,041	95,710	348,739
1912.....		23,876	750,267	58.3	90.0	754,142	156,471	118,400	449,881
1913.....		35,315	763,380	58.7	93.2	798,395	151,795	95,627	411,733
1914.....		32,236	891,017	58.0	89.7	923,253	152,903	85,955	541,193
1915.....		28,972	1,023,801	57.9	88.4	1,054,773	244,448	155,027	633,380
1916.....		74,731	636,313	57.1	87.0	711,049	100,650	89,173	361,088
1917.....		15,611	636,655	58.5	92.4	682,266	107,745	66,138	325,500
1918.....		8,063	921,438	58.8	93.1	929,501	128,703	107,037	541,666
1919.....	19,336	19,261	967,979	56.3	82.1	987,240	169,904	123,233	591,552
1920.....	36,180	49,546	833,027	57.4	88.9	882,573	217,037	87,075	491,035
1921.....	25,658	56,707	794,893	56.6	85.8	851,600	131,136	72,564	489,413

TABLE 25.—Winter and spring wheat: Condition of crop, United States, on first of months named, and per cent of winter wheat area abandoned, 1900-1922.

Year.	Winter wheat.						Spring wheat.				
	Decem-ber of pre-vious year.	Area abandoned.	April.	May.	June.	When har-vested.	June.	July.	August.	When har-vested.	
	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	
1900-1904.....	93.4		85.3	85.7	81.3	80.7	92.8	83.9	73.2	73.2	
1905-1909.....	89.5	6.6	88.8	87.8	82.5	81.9	93.2	90.3	85.6	82.8	
1910.....	95.8	13.7	80.8	82.1	80.0	81.5	92.8	61.6	61.0	63.1	
1911.....	82.5	10.7	83.3	86.1	80.4	76.8	94.6	73.8	59.8	56.7	
1912.....	86.6	20.1	80.6	79.7	74.3	73.3	95.8	89.3	90.4	90.8	
1913.....	93.2	4.7	91.6	91.9	83.5	81.6	93.5	73.8	74.1	75.3	
1914.....	97.2	3.1	95.6	95.9	92.7	94.1	95.5	92.1	75.5	68.0	
1915.....	88.3	2.7	88.8	92.9	85.3	84.4	94.9	93.3	93.4	94.6	
1916.....	87.7	11.4	78.3	82.4	73.2	75.7	88.2	89.0	63.4	48.6	
1917.....	85.7	31.0	63.4	73.2	70.9	75.9	91.6	83.6	68.7	71.2	
1918.....	79.3	13.7	78.6	86.4	83.8	79.5	95.2	86.1	79.6	82.1	
1919.....	98.6	1.1	99.8	100.5	94.9	93.0	91.2	80.9	53.9	48.5	
1920.....	85.2	11.9	75.6	79.1	78.2	79.7	89.1	88.0	73.4	64.1	
1921.....	87.9	4.6	91.0	88.8	77.9	77.2	93.4	80.8	66.6	62.5	
1922.....	76.0	14.5	78.4	83.5							

WHEAT—Continued.

TABLE 26.—Winter wheat: Forecast of production, monthly, with preliminary and final estimates.

[000 omitted.]

Year.	May.	June.	July.	August production estimate.	Final estimate.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1912.....	370,714	363,000	358,000	389,942	399,919
1913.....	513,571	492,000	489,000	510,519	523,561
1914.....	630,319	639,541	652,975	675,115	684,990
1915.....	692,924	675,500	663,291	656,866	673,947
1916.....	499,280	469,066	489,030	454,706	480,553
1917.....	366,116	373,032	402,378	417,347	412,901
1918.....	572,539	536,915	557,339	555,725	565,099
1919.....	899,915	892,822	838,582	715,301	760,377
1920.....	454,647	503,996	518,245	532,641	610,597
Average.....	558,892	555,097	551,982	545,351	567,994
1921.....	629,287	578,342	573,930	543,879	¹ 587,032

¹ Preliminary.

TABLE 27.—Spring wheat: Forecast of production, monthly, with preliminary and final estimates.

[000 omitted.]

Year.	June.	July.	August.	September.	October production estimate.	Final estimate.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1912.....	265,000	271,000	290,000	300,000	330,391	330,348
1913.....	232,000	218,000	233,000	243,000	242,714	239,819
1914.....	262,135	274,003	236,120	221,482	216,835	206,027
1915.....	273,513	294,97	307,250	322,463	345,163	351,854
1916.....	245,801	269,517	199,329	156,351	152,851	155,765
1917.....	282,813	275,970	236,019	250,359	242,450	223,754
1918.....	343,987	333,591	322,205	342,855	363,195	356,339
1919.....	343,181	322,096	225,080	208,049	203,170	207,602
1920.....	276,547	291,355	261,506	237,374	218,007	222,430
Average.....	282,775	283,390	256,723	253,548	257,197	254,882
1921.....	251,289	235,482	212,946	209,912	196,776	¹ 207,861

¹ Preliminary.

WHEAT—Continued.

TABLE 28.—Winter and spring wheat: Yield per acre, in States producing both, 1917-21, and average 1917-21.

State.	Winter wheat.						Spring wheat					
	5-yr. aver. 1917- 1921	1917	1918	1919	1920	1921	5-yr. aver. 1917- 1921	1917	1918	1919	1920	1921
	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>
New York.....	20.6	21.0	18.0	22.0	22.3	19.5	17.7	21.0	20.0	15.0	18.0	14.5
Pennsylvania.....	17.2	17.5	17.0	17.5	16.6	17.5	15.8	.....	17.0	15.0	16.0	15.0
Ohio.....	17.2	22.0	19.0	20.0	12.7	12.4	15.8	.....	21.5	16.0	13.0	12.5
Indiana.....	15.7	18.5	21.0	15.0	12.0	12.0	15.2	20.0	23.0	9.0	12.0	12.0
Illinois.....	17.8	18.5	21.5	17.5	15.1	16.2	19.5	25.0	26.9	14.5	16.5	14.5
Michigan.....	16.8	18.0	14.0	20.3	15.6	16.0	13.2	17.7	18.0	11.2	10.0	9.0
Wisconsin.....	20.6	24.0	21.2	19.6	22.0	16.0	16.4	21.2	24.7	12.4	12.6	11.1
Minnesota.....	16.9	18.0	18.0	15.0	19.6	14.0	13.4	17.5	21.0	9.3	9.5	9.5
Iowa.....	19.0	17.5	20.5	18.3	19.7	19.2	14.1	21.5	18.0	9.5	11.3	10.3
Missouri.....	13.9	15.3	17.2	13.5	12.5	10.9	11.6	9.0	15.6	8.5	13.0	12.0
South Dakota.....	14.5	14.0	17.0	13.0	14.5	14.0	11.8	14.0	19.0	8.0	9.0	9.0
Nebraska.....	14.1	12.0	11.1	14.8	17.4	15.3	11.5	16.5	11.9	8.5	9.5	11.3
Kansas.....	13.5	12.2	14.1	13.8	15.4	12.2	8.8	6.0	8.0	9.3	12.5	8.2
Montana.....	11.4	13.0	12.7	5.2	12.0	14.0	9.2	9.0	12.5	2.3	10.0	12.0
Wyoming.....	18.8	20.0	24.0	12.0	20.0	18.0	20.0	22.0	26.0	15.0	20.0	17.0
Colorado.....	15.2	23.0	10.5	13.2	17.5	12.0	18.7	22.0	17.5	15.4	19.4	19.0
New Mexico.....	14.0	10.0	10.0	19.1	18.2	12.6	19.2	18.0	24.0	18.7	18.5	16.6
Utah.....	15.8	14.0	16.6	12.7	15.9	19.9	23.5	25.0	23.8	18.7	23.7	26.3
Nevada.....	22.7	26.0	29.0	19.7	18.7	20.2	24.3	28.0	25.0	21.4	23.0	24.0
Idaho.....	20.6	18.0	22.0	18.5	20.0	24.3	21.8	22.0	21.0	18.0	24.0	24.0
Washington.....	23.6	21.5	23.5	21.1	24.0	28.1	12.6	13.6	9.5	13.0	11.9	15.0
Oregon.....	20.6	17.5	17.0	21.2	22.2	25.0	13.6	11.0	11.0	13.0	17.0	16.0
United States	14.9	15.1	15.2	15.1	15.3	13.7	11.6	12.5	16.2	8.2	10.5	10.5

WHEAT—Continued.

TABLE 29.—Wheat: Yield per acre, price per bushel Dec. 1, and value per acre, by States.

State.	Yield per acre (bushels).						Farm price per bushel (cents).														Value per acre ¹ (dollars).	
	5-year average, 1917-1921.	1917	1918	1919	1920	1921	10-year average, 1912-1921.	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	5-year average, 1916-1920.	1921			
Me.	18.8	14.0	22.0	18.8	22.0	17.0	171	103	101	109	112	187	235	237	220	230	175	45.50	29.75			
Vt.	18.2	20.0	22.0	16.0	19.0	14.0	159	98	100	100	107	165	236	231	227	200	125	42.72	17.50			
N. Y.	20.2	21.0	18.2	21.0	21.8	19.2	149	99	93	108	101	168	210	215	215	175	108	40.36	20.74			
N. J.	17.8	19.0	17.0	18.0	16.0	19.0	154	98	96	109	106	164	213	215	220	205	113	36.44	21.47			
Pa.	17.2	17.5	17.0	17.5	16.6	17.5	146	95	91	104	104	162	205	214	216	170	103	33.81	18.02			
Del.	14.0	16.5	13.0	12.0	17.0	11.5	148	96	88	109	109	162	208	222	213	171	98	28.42	11.27			
Md.	15.4	17.0	15.5	13.5	17.0	14.0	148	95	89	106	105	171	207	219	215	165	103	30.71	14.42			
Va.	11.8	13.0	12.0	11.8	12.5	9.8	153	101	96	108	108	165	216	219	224	180	116	24.85	11.87			
W. Va.	13.3	14.0	14.2	13.5	12.5	12.5	151	101	100	108	108	160	217	221	220	190	117	27.68	14.62			
N. C.	8.8	10.0	7.0	7.9	11.7	7.5	168	111	106	117	120	176	231	230	233	210	144	20.19	10.80			
S. C.	10.7	10.5	11.0	10.0	11.0	11.0	199	119	130	145	138	189	290	260	258	235	208	26.59	22.88			
Ga.	9.9	8.5	10.2	10.5	10.0	10.5	122	122	120	134	129	186	290	266	263	240	175	21.92	18.38			
Ohio	17.2	22.0	19.0	19.9	12.7	12.4	147	98	90	105	104	169	204	212	212	165	108	34.23	13.39			
Ind.	15.7	18.5	21.0	14.9	12.0	12.0	145	93	88	103	102	169	203	208	210	167	106	30.57	12.72			
Ill.	17.8	18.7	22.1	17.1	15.2	16.1	142	88	86	101	100	165	201	208	210	161	100	32.42	16.10			
Mich.	16.5	18.0	14.2	19.4	15.3	15.7	145	96	89	103	101	167	204	209	210	168	104	32.11	16.33			
Wis.	17.6	22.3	24.2	15.5	15.1	13.1	139	83	82	100	95	160	202	205	215	154	97	35.02	12.71			
Minn.	13.5	17.5	20.9	9.4	9.8	9.7	139	73	76	102	90	162	202	204	250	130	97	25.31	9.41			
Iowa	17.7	19.9	18.9	14.8	17.5	17.4	132	78	76	96	87	156	199	200	200	140	88	31.39	15.31			
Mo.	13.9	15.3	17.2	13.5	12.5	10.9	140	90	84	98	98	165	195	205	209	160	99	25.47	10.79			
N. Dak.	9.2	8.0	13.6	6.9	9.0	8.3	134	69	73	101	87	152	200	203	241	130	85	16.06	7.06			
S. Dak.	11.9	14.0	19.0	8.2	9.2	9.1	131	69	71	94	86	150	196	199	240	115	87	21.14	7.92			
Nebr.	14.1	13.8	11.2	13.8	16.8	15.1	129	69	71	95	84	160	195	197	202	131	83	25.98	12.53			
Kans.	13.5	12.2	14.1	13.8	15.4	12.2	134	74	79	95	89	164	198	199	215	130	93	24.32	11.35			
Ky.	11.3	12.0	13.0	11.5	10.2	10.0	151	99	96	103	105	166	212	214	211	191	115	22.39	11.50			
Tenn.	9.6	9.2	10.0	9.3	9.5	10.0	155	100	98	105	108	169	222	214	222	195	120	19.41	12.00			
Ala.	9.6	10.0	9.0	9.0	9.6	10.5	181	113	115	126	125	185	270	245	245	230	153	22.15	16.06			
Miss.	13.9	15.0	16.5	14.0	10.0	14.0	174	97	95	125	105	175	300	250	250	213	130	33.76	18.20			
Tex.	12.3	12.0	10.0	16.5	13.0	10.0	146	93	94	99	107	173	210	215	200	172	100	24.22	10.00			
Okla.	13.3	11.5	12.6	14.0	16.0	12.5	133	75	82	92	89	167	194	210	205	135	86	22.83	10.75			
Ark.	11.3	16.0	12.0	9.5	9.5	9.3	145	94	90	99	101	163	201	207	202	190	100	21.46	9.30			
Mont.	9.7	10.4	12.6	2.7	10.3	12.3	129	64	66	91	78	161	192	194	235	128	85	19.00	10.46			
Oreg.	19.6	21.2	25.4	14.4	20.0	17.2	128	80	72	89	78	145	200	189	212	135	79	35.85	13.59			
Colo.	16.0	22.6	12.3	13.7	18.0	13.5	127	73	78	87	80	150	193	195	202	135	76	29.85	10.26			
N. Mex.	16.1	12.7	16.7	19.0	18.3	13.6	139	90	97	90	90	150	215	210	200	140	105	30.78	14.28			
Ariz.	24.2	25.0	26.0	25.0	24.0	21.0	167	110	110	125	115	150	210	240	225	262	125	55.51	26.25			
Utah.	19.4	19.0	20.2	15.4	19.5	22.8	128	75	73	86	86	152	178	188	210	153	75	33.28	17.10			
Nev.	24.1	27.8	25.5	21.2	22.3	23.5	142	100	82	95	95	140	180	206	214	180	130	45.71	30.55			
Idaho.	21.3	20.3	21.3	18.2	22.4	24.1	122	66	63	87	80	146	182	192	205	125	72	35.58	17.35			
Wash.	16.9	15.8	13.1	16.8	16.9	22.0	129	68	73	100	82	143	193	196	214	135	86	29.77	18.92			
Oreg.	18.4	14.5	14.7	19.2	20.9	22.8	129	72	75	102	84	145	182	201	212	130	85	31.43	19.38			
Calif.	15.9	19.8	15.0	15.5	14.0	15.0	145	93	95	104	95	152	200	216	204	180	107	30.63	16.05			
U. S.	13.8	14.1	15.6	12.8	13.6	12.7	136.3	76.0	79.9	98.6	91.9	160.3	200.8	204.2	214.9	143.7	92.7	25.34	11.81			

¹ Based upon farm price Dec. 1.

WHEAT—Continued.

TABLE 30.—Wheat: Extent and causes of yearly crop losses, 1909–1920.

Year.	Deficient moisture.	Excessive moisture.	Floods.	Frost or freeze.	Hail.	Hot winds.	Storms.	Total climatic.	Plant disease.	Insect pests.	Animal pests.	Defective seed.	Total.
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
1920.....	8.1	2.3	0.2	1.0	1.0	1.5	0.4	17.6	9.5	4.4	0.1	0.1	32.2
1919.....	12.3	6.2	.4	1.3	.8	2.9	.3	24.3	10.2	2.5	(1)	.1	37.6
1918.....	14.6	.3	.1	3.8	1.1	2.0	.2	22.4	1.5	1.1	.3	.1	25.7
1917.....	19.1	.4	.1	11.8	1.0	1.6	.2	34.4	.7	.7	.1	.1	36.3
1916.....	6.9	3.8	.6	5.1	1.3	2.7	.2	21.2	12.6	4.0	.1	.1	33.7
1915.....	1.3	7.3	1.0	1.2	1.6	.1	.4	13.0	2.4	3.6	.1	.1	19.7
1914.....	6.7	1.4	.1	1.1	1.0	2.7	.2	13.4	3.0	2.6	.1	.1	19.8
1913.....	14.2	.4	.2	1.9	.7	1.7	.3	20.0	.3	2.2	.1	.1	23.5
1912.....	8.1	1.8	.3	9.5	1.5	1.8	.4	24.0	1.8	2.3	.3	.2	29.5
1911.....	25.5	.8	(1)	1.5	.4	3.8	.1	32.3	1.9	1.9	.2	.2	37.8
1910.....	18.9	.9	.2	6.6	.5	2.6	.2	30.0	.9	1.9	.4	.4	33.8
1909.....	8.5	3.2	.7	2.4	2.0	1.2	.6	18.9	1.6	1.1	.2	.3	22.8
Average.....	12.0	2.4	.3	3.9	1.1	2.0	.3	22.6	3.9	2.4	.2	.2	29.8

¹ Less than 0.05 per cent.

TABLE 31.—Wheat: Farm price, cents per bushel on first of each month, 1908–1921.

Year	Jan- ary.	Feb- ruary.	March.	April.	May.	June.	July.	Aug- ust.	Sept- ember.	Octo- ber.	Nov- ember.	Dec- ember.	Aver- age.
1908.....	88.7	89.0	89.2	89.8	89.3	92.3	80.5	90.4	88.7	90.4	91.5	92.8	90.3
1909.....	93.5	95.2	103.9	107.0	115.9	123.5	120.8	107.1	95.2	94.6	99.9	98.6	101.3
1910.....	103.4	105.0	105.1	104.5	99.9	97.6	95.3	98.9	95.8	93.7	90.5	88.3	96.5
1911.....	88.6	89.8	85.4	83.8	84.6	86.3	81.3	82.7	84.8	88.4	91.5	87.4	86.9
1912.....	88.0	90.4	90.7	92.5	99.7	102.8	99.0	89.7	85.8	83.4	83.8	76.0	87.4
1913.....	76.2	79.9	80.6	79.1	80.9	82.7	81.4	77.1	77.1	77.9	77.0	79.9	78.4
1914.....	81.0	81.6	83.1	84.2	83.9	84.4	76.9	76.5	93.3	93.5	97.2	98.6	88.4
1915.....	107.8	129.9	133.6	131.7	139.6	131.5	102.8	106.5	95.0	90.9	93.1	91.9	105.2
1916.....	102.8	113.9	102.9	98.6	102.5	100.0	93.0	107.1	131.2	136.3	158.4	160.3	125.9
1917.....	150.3	164.8	164.4	180.0	245.9	248.5	220.1	228.9	209.7	200.6	200.0	200.8	200.8
1918.....	201.9	201.2	202.7	202.6	203.6	202.5	203.2	204.5	205.6	205.8	206.0	204.2	204.3
1919.....	204.8	207.5	208.0	214.2	231.1	228.4	222.0	217.2	205.7	209.6	213.2	214.9	212.7
1920.....	231.8	235.7	226.6	231.0	251.3	258.3	232.2	218.7	214.3	188.0	143.7	217.2	217.2
1921.....	149.2	149.3	147.2	133.5	110.7	127.4	112.2	104.8	101.2	105.6	94.2	92.7	112.7
Aver. 1912–1921.	139.4	145.4	144.0	145.0	154.9	156.6	146.4	144.4	142.3	141.8	141.1	136.3	143.3

TABLE 32.—Wheat: Monthly marketings by farmers, 1916–1921.

Month.	Estimated amount sold monthly by farmers of United States (millions of bushels).						Per cent of year's sales.					
	1916–17	1917–18	1918–19	1919–20	1920–21	5-yr. aver.	1916–17	1917–18	1918–19	1919–20	1920–21	5-yr. aver.
July.....	83	41	136	137	82	96	13.3	7.4	17.6	17.1	12.1	13.5
August.....	111	69	154	186	97	123	17.9	12.4	19.9	23.2	14.3	17.5
September.....	104	108	139	125	108	117	16.8	19.3	18.0	15.6	15.9	17.1
October.....	87	101	107	89	72	91	14.1	18.0	13.8	11.1	10.6	13.5
November.....	60	77	67	60	47	62	9.7	13.7	8.7	7.5	6.9	9.3
December.....	35	43	56	45	42	44	5.6	7.6	7.3	5.7	6.2	6.5
January.....	45	26	36	34	35	36	7.2	4.7	4.6	4.2	5.5	5.2
February.....	20	22	24	24	36	25	3.3	3.9	3.1	3.0	5.3	3.7
March.....	24	21	16	23	33	23	3.9	3.7	2.0	2.9	4.9	3.5
April.....	19	23	13	25	34	23	3.1	4.1	1.6	3.1	5.0	3.4
May.....	19	17	15	27	44	24	3.0	3.1	1.9	3.4	6.4	3.6
June.....	13	12	12	25	47	22	2.1	2.1	1.5	3.2	6.9	3.2
Season....	620	560	775	800	680	686	100.0	100.0	100.0	100.0	100.0	100.0

WHEAT—Continued.

TABLE 33.—*Spring wheat varieties: Production in principal States, 1914-1921.*

The bulk of the spring wheat crop is produced in the four States of Minnesota, North and South Dakota, and Montana. The five leading varieties of spring wheat in these States have made interesting shifts in relative importance in the past seven years. Marquis was least important in 1914, but by 1916 it had jumped into first place, which it has held since, although its peak of popularity seems to have been reached in 1919, when it comprised 57.6 per cent of all the spring wheat raised in these four States as compared with 57 per cent in 1920. Durum wheat is the only one of the leading varieties that gained, relatively, in 1921. This variety has been gaining, relatively, steadily since 1914. It is the heaviest yielder in bushels per acre. Velvet chaff, blue stem, and fife have each lost in relative importance each year since 1916. Comparative figures are given below.

PER CENT OF STATE TOTAL, AND YIELD PER ACRE.

State and year.	Marquis.		Velvet chaff.		Blue stem.		Durum.		Fife.		Other.	
	P. ct.	Bu.	P. ct.	Bu.	P. ct.	Bu.	P. ct.	Bu.	P. ct.	Bu.	P. ct.	Bu.
Minnesota:												
1921.....	74.8	9.6	9.8	8.5	4.9	8.0	8.1	11.9	1.3	9.1	1.1	10.3
1920.....	72.3	9.8	14.4	8.1	6.0	7.9	5.2	12.0	1.2	9.6	.9	10.8
1919.....	67.8	9.7	17.8	8.3	7.9	7.8	4.3	11.9	1.4	8.8	.8	9.5
1918.....	59.7	22.4	22.4	19.0	11.8	17.0	3.3	20.0	1.6	17.6	1.2	18.0
1917.....	47.4	17.2	26.8	16.0	18.6	14.0	3.1	15.5	3.1	15.0	1.0	14.0
1916.....	31.7	11.0	29.9	7.4	31.9	5.5	2.3	8.5	3.9	6.9	.3	.....
1914.....	3.1	12.8	30.6	11.6	53.1	9.8	2.0	12.3	7.1	10.3	4.1	11.0
North Dakota:												
1921.....	41.7	7.4	5.0	7.4	2.8	6.8	45.5	9.7	3.1	7.7	1.9	10.1
1920.....	46.7	8.5	8.1	7.4	3.9	7.2	36.4	10.5	3.3	8.8	1.6	11.6
1919.....	47.5	6.6	8.0	6.8	5.0	5.3	34.6	7.9	4.3	5.8	.6	7.8
1918.....	47.2	13.2	9.1	12.0	7.0	11.0	29.2	14.0	6.0	11.0	1.5	12.0
1917.....	43.4	8.0	10.1	7.5	12.1	7.2	25.3	9.0	8.1	7.0	1.0	6.8
1916.....	38.5	6.0	12.2	5.2	14.2	3.8	18.6	7.3	16.0	4.5	.5	5.0
1914.....	5.0	14.9	11.6	12.1	44.6	10.3	12.7	13.9	21.5	10.9	4.6	10.8
South Dakota:												
1921.....	49.9	8.0	4.3	7.1	1.2	7.1	42.4	11.0	.8	7.4	1.4	11.0
1920.....	61.9	8.2	6.3	7.3	1.9	8.1	28.0	12.4	.6	9.2	1.2	11.5
1919.....	63.8	7.6	8.4	7.4	3.1	6.7	22.7	9.8	1.0	7.1	1.0	8.8
1918.....	59.6	19.3	12.5	17.0	5.5	15.4	20.4	19.5	1.6	16.0	.4	16.5
1917.....	44.3	15.3	20.6	13.1	11.4	11.1	20.6	15.6	3.1	10.0	.....	.....
1916.....	25.4	7.9	32.1	6.2	25.8	5.0	13.6	8.2	2.9	5.0	.2	.....
1914.....	3.1	11.2	32.0	9.3	30.9	7.5	21.7	11.2	11.3	9.3	1.0	8.7
Montana:												
1921.....	71.0	12.2	3.2	11.3	3.7	12.6	15.5	11.2	2.9	12.2	3.7	12.4
1920.....	66.8	10.8	2.5	10.4	5.0	10.7	17.8	11.5	3.1	10.7	4.7	12.2
1919.....	71.4	4.8	4.3	5.4	4.6	5.8	13.3	4.5	3.9	4.3	2.5	4.4
1918.....	66.2	13.0	2.8	12.7	5.6	10.5	21.2	12.9	2.8	10.8	1.4	13.3
1917.....	75.0	9.3	1.7	7.5	.....	6.5	13.3	9.0	3.3	7.5	1.7	7.5
Four States:												
1921.....	53.3	.....	5.3	.....	3.0	.....	34.0	.....	2.4	.....	2.0	.....
1920.....	56.6	.....	8.0	.....	4.1	.....	26.9	.....	2.5	.....	1.9	.....
1919.....	57.6	.....	10.4	.....	5.3	.....	23.0	.....	2.8	.....	.9	.....
1918.....	55.2	.....	13.1	.....	7.9	.....	19.2	.....	3.5	.....	1.1	.....
1917.....	46.9	.....	17.6	.....	13.6	.....	16.2	.....	4.9	.....	.8	.....

PRODUCTION IN BUSHELS.

	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.
Minnesota:						
1921.....	17,694	2,318	1,159	1,916	308	260
1920.....	19,232	3,830	1,596	1,383	319	240
1919.....	23,412	6,147	2,728	1,485	483	276
1918.....	44,506	16,699	8,797	2,460	1,193	895
1917.....	23,807	13,460	9,342	1,557	1,557	502
1916.....	8,084	7,625	8,135	586	994	76
1914.....	1,302	12,852	22,302	840	2,982	1,722
North Dakota:						
1921.....	30,551	3,663	2,051	33,336	2,271	1,392
1920.....	37,474	6,500	3,129	29,209	2,648	1,284
1919.....	29,819	5,022	3,139	21,720	2,699	377
1918.....	49,877	9,616	7,897	30,856	6,341	1,585
1917.....	24,304	5,656	6,776	14,168	4,536	560
1916.....	15,140	4,798	5,584	7,314	6,292	197
1914.....	4,111	9,425	36,395	10,389	17,549	3,723
South Dakota:						
1921.....	12,441	1,072	299	10,570	199	349
1920.....	15,768	1,605	484	7,131	153	331
1919.....	19,247	2,534	935	6,848	302	302
1918.....	36,237	7,600	3,344	12,403	973	243
1917.....	19,226	8,940	4,948	8,941	1,345	0
1916.....	5,601	7,078	5,689	2,999	639	44
1914.....	900	9,888	9,388	6,724	3,501	199

WHEAT—Continued.

TABLE 33.—Spring wheat varieties: Production in principal States, 1914-1921—Con.

PRODUCTION IN BUSHELS—Continued.

State and year.	Marquis.	Velvet chaff.	Blue stem.	Durum.	Fife.	Other.
Montana:	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>
1921.....	16,997	766	886	3,711	694	886
1920.....	15,873	594	1,189	4,231	737	1,141
1919.....	5,063	305	326	943	277	177
1918.....	14,101	596	1,193	4,516	596	298
1917.....	7,573	172	505	1,343	333	172
Four states:						
1921.....	77,683	7,819	4,395	49,533	3,472	2,887
1920.....	88,350	12,529	6,398	41,954	3,857	2,996
1919.....	77,541	14,008	7,128	30,996	3,761	1,132
1918.....	144,721	34,511	20,731	50,235	9,103	3,021
1917.....	74,910	28,228	21,571	28,009	7,771	1,234

TABLE 34.—Wheat: Monthly and yearly average price per bushel of reported sales, 1910-1911 to 1921-1922.

No. 2 RED WINTER, CHICAGO.¹

Crop year.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Weighted average.
1910-11.....	\$1.07	\$1.02	\$0.99	\$0.96	\$0.93	\$0.94	\$0.98	\$0.91	\$0.90	\$0.90	\$0.96	\$0.91	\$1.02
1911-12.....	.86	.90	.93	1.00	.96	.96	.97	1.01	1.03	1.09	1.16	1.10	.90
1912-13.....	1.05	1.03	1.03	1.06	.99	.86	1.09	.99	.95	1.02	1.03	1.00	1.03
1913-14.....	.87	.88	.93	.92	.92	.94	.97	.97	.95	.95	.99	.82	.88
1914-15.....	.82	.92	1.11	1.12	1.15	1.20	1.39	1.57	1.52	1.59	1.55	1.24	1.07
1915-16.....	1.13	1.11	1.08	1.12	1.12	1.23	1.30	1.23	1.13	1.22	1.15	1.05	1.13
1916-17.....	1.23	1.43	1.53	1.66	1.85	1.76	1.89	1.74	1.99	2.43	2.94	2.76	1.68
1917-18.....	2.50	2.30	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.16	2.17	2.25
1918-19.....	2.22	2.21	2.23	2.25	2.24	2.29	2.34	2.28	2.36	2.52	2.76	2.32	2.22
1919-20.....	2.23	2.24	2.24	2.24	2.29	2.44	2.64	2.42	2.55	2.63	3.10	2.89	2.24
1920-21.....	2.59	2.50	2.53	2.20	2.01	2.02	1.94	1.85	1.65	1.41	1.67	1.47	2.22
1921-22.....	1.24	1.22	1.29	1.18	1.23	1.18	.....	.....	.....	.....	.....	.....	.....
11 year average..	1.51	1.50	1.52	1.52	1.51	1.53	1.61	1.56	1.56	1.63	1.68	1.61	1.51

No. 1 NORTHERN SPRING, MINNEAPOLIS.²

	\$1.21	\$1.13	\$1.09	\$1.08	\$1.04	\$1.03	\$1.06	\$1.02	\$0.98	\$0.96	\$0.99	\$0.97	\$1.05
1910-11.....	1.21	1.13	1.09	1.08	1.04	1.03	1.06	1.02	1.08	1.10	1.16	1.13	1.07
1911-12.....	.99	1.05	1.09	1.10	1.05	1.02	1.06	1.06	1.08	1.10	1.16	1.13	1.07
1912-13.....	1.09	.98	.89	.90	.84	.82	.89	.87	.85	.88	.91	.92	.87
1913-14.....	.91	.88	.87	.84	.85	.86	.87	.93	.92	.91	.94	.92	.88
1914-15.....	.92	1.10	1.12	1.11	1.18	1.20	1.38	1.52	1.49	1.58	1.58	1.35	1.20
1915-16.....	1.44	1.18	.97	1.02	1.02	1.14	1.29	1.26	1.14	1.22	1.22	1.11	1.09
1916-17.....	1.21	1.64	1.64	1.79	1.95	1.79	1.93	1.86	2.03	2.38	2.96	2.73	1.76
1917-18.....	2.66	2.47	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.20
1918-19.....	2.17	2.23	2.23	2.19	2.22	2.22	2.21	2.24	2.36	2.56	2.59	2.48	2.25
1919-20.....	2.66	2.59	2.56	2.67	2.85	3.07	3.01	2.67	2.84	3.06	3.09	2.93	2.72
1920-21.....	2.89	2.56	2.54	2.16	1.80	1.68	1.79	1.72	1.66	1.53	1.55	1.69	2.07
1921-22.....	1.67	1.48	1.51	1.34	1.25	1.30	.....	.....	.....	.....	.....	.....	.....
11 year average..	1.64	1.62	1.56	1.55	1.54	1.55	1.61	1.57	1.59	1.67	1.74	1.67	1.56

¹ Compiled from the Chicago Daily Trade Bulletin.² Based on small number of sales.³ Compiled from Minneapolis Market Record.

WHEAT—Continued.

TABLE 34.—Wheat: Monthly and yearly average price per bushel of reported sales, 1910-1911 to 1921-1922—Continued.

No. 1 DARK NORTHERN SPRING, MINNEAPOLIS.*

Crop year.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Weighted average.
1917-18.....		\$2.50	\$2.21	\$2.21	\$2.21	\$2.21	\$2.21	\$2.21	\$2.21	\$2.21	\$2.21	\$2.21	\$2.21
1918-19.....	\$2.21	2.29	2.21	2.23	2.25	2.25	2.25	2.29	2.41	2.63	2.68	2.56	2.35
1919-20.....	2.72	2.71	2.77	2.84	3.00	3.25	3.34	2.90	2.97	3.23	3.26	3.01	3.09
1920-21.....	2.91	2.59	2.65	2.21	1.82	1.72	1.81	1.74	1.72	1.57	1.67	1.71	2.02
1921-22.....	1.81	1.57	1.56	1.37	1.30	1.33							

No. 2 HARD WINTER, KANSAS CITY.†

1910-11.....	\$1.04	\$1.00	\$0.99	\$0.95	\$0.91	\$0.93	\$0.95	\$0.90	\$0.88	\$0.88	\$0.90	\$0.88	\$0.98
1911-12.....	.87	.93	.93	1.04	1.00	1.00	1.05	1.03	1.05	1.09	1.11	1.09	.97
1912-13.....	.92	.89	.88	.88	.83	.84	.87	.86	.88	.88	.87	.88	.88
1913-14.....	.82	.83	.87	.84	.83	.84	.85	.86	.88	.87	1.00	.85	.84
1914-15.....	.78	.91	1.01	1.02	1.08	1.13	1.34	1.54	1.49	1.54	1.50	1.21	.93
1915-16.....	1.36	1.26	1.07	1.07	1.03	1.12	1.20	1.20	1.05	1.12	1.10	1.00	1.19
1916-17.....	1.14	1.41	1.57	1.67	1.85	1.72	1.89	1.82	1.97	2.43	3.01	2.71	1.71
1917-18.....	2.68	2.61	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	(*)	2.52
1918-19.....	2.20	2.16	2.16	2.16	2.15	2.24	2.31	2.26	2.39	2.62	2.60	2.47	2.19
1919-20.....	2.25	2.18	2.24	2.30	2.46	2.63	2.82	2.42	2.49	2.75	2.93	2.76	2.42
1920-21.....	2.67	2.44	2.43	2.06	1.78	1.71	1.72	1.62	1.55	1.33	1.47	1.34	1.83
1921-22.....	1.14	1.15	1.22	1.10	1.10	1.09							
11 year average..	1.53	1.51	1.48	1.46	1.46	1.48	1.56	1.51	1.52	1.60	1.68	1.39	1.50

No. 2 RED WINTER, ST. LOUIS.‡

1910-11.....	\$1.07	\$1.02	\$1.02	\$1.00	\$0.96	\$0.98	\$1.03	\$0.96	\$0.93	\$0.90	\$0.94	\$0.88	\$0.99
1911-12.....	.84	.88	.94	1.00	.96	.97	1.02	1.01	1.01	1.13	1.21	1.11	.94
1912-13.....	1.03	1.04	1.03	1.09	1.04	1.07	1.11	1.09	1.08	1.09	1.04	.99	1.05
1913-14.....	.85	.88	.94	.93	.94	.95	.96	.95	.95	.94	.96	.84	.89
1914-15.....	.87	.93	1.10	1.10	1.11	1.18	1.40	1.57	1.50	1.54	1.50	1.19	1.10
1915-16.....	1.17	1.14	1.14	1.21	1.16	1.23	1.34	1.30	1.17	1.22	1.20	1.10	1.20
1916-17.....	1.25	1.45	1.60	1.73	1.87	1.83	1.96	1.88	2.05	2.66	3.04	2.65	1.63
1917-18.....	2.36	2.32	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.23
1918-19.....	2.21	2.21	2.19	2.22	2.22	2.32	2.41	2.38	2.55	2.71	2.60	2.41	2.23
1919-20.....	2.22	2.20	2.21	2.24	2.29	2.48	2.70	2.55	2.58	2.76	2.99	2.89	2.30
1920-21.....	2.70	2.47	2.56	2.25	2.03	1.99	2.02	1.90	1.66	1.41	1.58	1.50	2.18
1921-22.....	1.23	1.23	1.36	1.26	1.20	1.21							
11 year average..	1.51	1.50	1.53	1.54	1.52	1.56	1.65	1.61	1.61	1.68	1.75	1.61	1.52

* Compiled from Minneapolis Market Record.

† Compiled from Kansas City Price Current.

‡ No sales.

§ Compiled from St. Louis Daily Market Reporter.

WHEAT—Continued.

TABLE 35.—Wheat flour: Wholesale price per barrel, 1921-1913

Date.	Chicago.						Cincinnati.			New York.			St. Louis.		
	Winter patents.			Spring patents.			Winter patents.			Spring patents.			Winter patents.		
	Low.	High.	Aver.	Low.	High.	Aver.	Low.	High.	Aver.	Low.	High.	Aver.	Low.	High.	Aver.
1921.	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>
Jan....	8.00	9.75	9.00	8.40	9.50	9.06	9.50	11.25	10.20	9.00	10.25	9.61	8.65	11.50	9.73
Feb....	8.10	9.40	8.81	8.20	9.50	8.94	9.15	10.00	9.71	8.25	9.50	8.98	8.50	11.00	9.56
Mar....	7.75	8.85	8.39	8.15	9.25	8.64	8.25	9.65	8.85	8.15	9.50	8.80	7.50	10.50	8.66
Apr....	7.45	7.90	7.69	8.10	8.55	8.28	7.75	8.65	8.05	7.35	9.00	8.11	6.50	8.00	7.08
May....	7.60	8.70	8.28	8.15	9.00	8.69	7.50	8.80	8.31	7.75	9.50	8.66	6.50	8.50	7.72
June....	8.10	9.35	8.59	8.50	9.50	8.96	7.75	9.00	8.38	8.25	9.75	9.06	6.50	9.50	7.74
July....	6.90	8.00	7.41	8.25	9.60	8.82	6.50	8.00	7.17	8.25	10.00	9.03	6.00	7.00	6.57
Aug....	6.30	7.10	6.77	7.65	8.75	8.24	6.25	7.25	6.81	7.75	9.50	8.49	6.15	7.00	6.62
Sept....	6.80	7.40	7.07	7.05	8.10	7.70	6.25	7.35	6.78	7.85	8.75	8.30	6.25	7.50	6.97
Oct....	6.10	6.70	6.30	6.90	7.70	7.17	5.75	6.75	6.28	6.75	8.40	7.52	5.50	7.50	6.51
Nov....	5.80	6.40	6.14	6.55	7.10	6.89	6.25	6.75	6.60	6.75	7.50	6.94	5.75	6.75	6.25
Dec....	6.00	6.35	6.14	6.60	7.10	6.76	6.25	6.75	6.50	6.50	7.50	6.95	5.75	6.75	6.25
	5.80	9.75	7.55	6.55	9.60	8.18	5.75	11.25	7.80	6.50	10.25	8.37	5.50	11.50	7.50
1920....	7.30	14.25	10.72	7.90	15.60	12.72	10.75	15.00	12.52	8.25	15.75	12.82	8.50	15.00	11.77
1919....	9.30	13.00	11.12	10.00	15.00	14.50	10.50	13.25	11.42	10.35	15.00	12.23	9.40	12.65	10.60
1918....	9.80	11.25	10.62	9.80	11.75	11.03	10.35	11.35	10.94	10.50	11.95	10.96	8.89	12.50	10.22
1917....	8.10	17.00	.....	8.20	17.80	.....	7.25	15.25	.....	8.65	16.75	.....	7.90	15.25	.....
1916....	5.00	8.65	.....	5.00	9.75	.....	4.50	8.75	.....	5.45	10.00	.....	4.75	9.00	.....
1915....	4.50	7.80	.....	4.50	6.90	.....	4.65	6.65	.....	4.90	8.25	.....	4.60	7.50	.....
1914....	3.45	5.50	.....	4.00	6.90	.....	3.05	4.90	.....	4.35	7.00	.....	3.35	5.70	.....
1913....	3.90	5.10	.....	4.00	5.60	.....	2.90	4.15	.....	4.40	5.00	.....	3.70	5.15	.....

WHEAT—Continued.

TABLE 36.—Wheat: Monthly and yearly receipts and shipments, 1910-11 to 1921-22.¹

[In thousands of bushels; i. e., 000 omitted.]

Crop year.	Chicago.		Milwaukee.		Minneapolis.		Duluth.		St. Louis.		Toledo.		Detroit.		Kansas City.		Peoria.		Omaha.		Indianapolis.		Total.	
	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.
1910-11.....	27,400	17,259	10,062	7,875	90,774	20,866	28,628	25,352	20,127	20,082	4,122	1,536	2,003	105	40,537	26,709	1,225	1,074	(2)	(2)	(2)	224	875	120,938
1911-12.....	35,563	30,003	8,497	3,411	96,889	52,745	30,598	25,571	115,336	12,790	6,930	4,644	2,861	401	23,827	16,970	1,518	1,106	11,030	9,690	176	173	233	157,504
1912-13.....	44,168	43,325	10,339	5,685	126,161	82,761	83,530	75,435	58,792	27,179	4,734	2,475	977	715	48,374	33,415	1,931	1,616	20,193	13,133	1,560	162	380	236,261
1913-14.....	50,884	47,905	6,372	3,442	103,679	28,984	62,799	64,799	27,244	22,242	5,802	3,704	1,442	842	32,152	23,730	1,629	1,424	16,453	11,958	1,898	812	316	451,400,852
1914-15.....	107,718	91,112	9,550	7,010	112,716	39,510	62,268	59,867	34,196	26,913	7,089	4,168	2,763	2,012	77,745	64,650	3,786	3,527	17,767	11,639	3,028	916	138,626	311,324
1915-16.....	85,819	61,531	7,337	3,505	163,202	54,932	86,674	82,540	42,226	31,046	9,965	5,571	2,800	1,580	70,442	51,632	4,503	5,356	23,613	16,215	4,851	1,907	732	411,315,865
1916-17.....	56,708	47,242	10,595	8,069	119,701	39,589	30,978	36,789	41,024	183,080	5,719	2,890	2,724	1,082	68,720	62,878	2,870	2,468	33,194	29,221	2,800	904	473	141,964,167
1917-18.....	13,735	8,118	13,138	1,336	82,229	19,072	16,602	13,646	17,023	13,284	4,583	1,379	1,597	280	22,226	8,255	2,195	1,422	3,565	6,066	2,990	1,192	184	54,74,010
1918-19.....	54,533	67,122	15,535	12,575	117,787	38,174	88,383	86,932	42,547	25,621	5,940	1,348	1,608	306	54,106	35,696	3,405	3,371	19,730	15,115	6,477	2,080	410,071	288,340
1919-20.....	74,167	57,215	7,009	3,674	119,419	37,468	18,317	13,654	45,266	52,956	8,046	2,285	1,688	289	92,215	55,673	3,603	4,285	23,582	21,002	7,471	3,340	408	314,230,841
1920-21.....	30,615	27,886	4,424	2,556	118,579	50,724	45,083	43,272	45,161	31,479	5,052	1,400	1,656	149	57,143	64,637	2,199	2,011	28,192	24,372	4,491	438	372	75,248,944
11-year average..	52,846	45,947	9,350	5,379	113,740	37,721	51,169	47,983	33,554	25,147	6,180	2,829	2,012	704	56,117	40,477	2,631	2,513	20,532	15,943	3,583	1,033	349	321,223,458

Month.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.						
1920.																								
July.....	2,562	2,747	242	231	7,008	3,451	2,707	2,051	4,271	2,232	255	98	78	15	6,770	4,498	323	221	2,700	1,991	722	33	27,728	18,460
August.....	8,985	6,464	292	239	8,037	2,802	1,211	1,364	6,755	5,168	762	61	96	21	8,532	4,185	732	662	4,226	3,492	1,554	144	40,832	24,602
September.....	3,920	5,249	357	223	16,066	5,338	9,213	7,491	8,585	5,579	461	70	143	3	7,598	4,730	299	320	3,313	2,728	518	55	43,808	27,303
October.....	1,534	1,404	323	11	16,849	5,338	9,213	7,491	8,585	5,579	461	187	122	12	7,668	5,116	137	166	3,956	2,800	320	47	43,823	25,327
November.....	1,262	1,940	204	106	14,471	4,887	7,380	9,304	3,921	1,763	641	295	152	5	7,509	4,800	136	108	2,063	1,996	153	18	37,292	24,222
December.....	2,478	1,306	397	111	10,541	4,657	4,269	4,815	3,721	2,254	506	101	156	9	6,668	6,033	175	107	1,755	1,800	114	10	30,780	21,233
1921.																								
January.....	1,193	1,415	249	114	9,411	4,309	2,099	1,370	4,407	3,038	171	128	199	17	10,066	6,764	94	90	2,308	1,761	166	6	30,393	19,232
February.....	4,134	1,192	243	224	7,506	3,142	1,605	1,370	2,865	2,255	174	110	145	4	6,537	5,643	74	65	998	1,020	203	2	21,394	15,063
March.....	2,218	1,484	268	188	7,292	4,328	837	468	2,696	2,011	205	51	125	11	5,785	5,522	87	107	1,162	1,558	202	14	20,927	13,712
April.....	1,311	1,723	143	146	7,340	4,177	2,701	3,448	3,283	2,253	255	113	152	13	6,520	5,976	46	105	1,736	1,876	231	45	23,739	19,875
May.....	1,906	1,754	621	443	6,525	2,941	1,594	2,327	2,828	1,920	284	114	115	6	7,216	5,621	45	44	2,326	1,766	109	45	23,569	16,961
June.....	2,512	2,208	1,085	370	9,483	5,491	2,887	4,099	3,080	2,281	251	137	144	21	7,249	5,749	51	46	1,539	1,384	199	39	28,480	20,406
July.....	14,070	3,921	1,442	949	7,043	3,938	2,263	2,667	8,952	3,622	943	91	159	414	378	5,529	2,674	378	5,529	2,674	1,790	347	59,700	26,030
August.....	13,270	18,390	2,893	3,253	15,036	5,556	6,192	4,300	7,159	4,762	1,063	189	187	12	115,675	11,138	983	280	5,874	6,451	587	133	68,919	54,474
September.....	3,297	4,478	4,023	1,415	13,208	8,163	12,567	13,667	4,207	3,922	595	381	103	71	9,271	8,411	235	230	3,369	4,002	191	147	51,006	44,977
October.....	1,956	1,836	515	356	16,608	5,570	8,705	7,748	3,589	3,234	656	265	139	10	7,434	6,547	93	74	2,046	2,273	213	62	42,014	28,275
November.....	1,157	2,074	104	495	8,870	2,840	5,523	7,681	1,583	1,506	1,776	639	93	27	4,361	3,672	89	65	637	1,026	147	61	24,342	20,084
December.....	1,795	7,700	103	83	8,180	2,264	2,851	3,097	1,705	1,302	470	478	129	23	6,288	3,243	59	59	921	1,004	115	24	21,616	12,277

* No report.

† From Chicago Daily Trade Bulletin and Board of Trade Reports.

WHEAT—Continued.

TABLE 37.—Wheat: Visible supply in United States, first of each month, 1910-11 to 1921-22.¹

[In thousands of bushels; i. e., 000 omitted.]

Crop year.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1910-11.....	12,034	12,375	26,452	34,967	40,120	42,989	44,282	43,251	39,368	34,152	27,605	26,838
1911-12.....	23,833	41,316	48,057	52,709	65,199	69,948	70,489	60,425	57,080	51,042	41,722	30,847
1912-13.....	23,350	18,841	19,586	31,658	41,712	55,400	65,342	64,913	63,786	58,996	47,157	37,940
1913-14.....	30,163	37,677	44,530	49,026	55,105	58,808	63,743	60,806	57,021	51,862	43,378	29,775
1914-15.....	14,999	29,744	31,534	51,586	65,922	74,086	72,861	60,252	49,682	39,323	26,439	19,082
1915-16.....	7,948	6,582	7,111	15,900	22,639	48,797	67,311	68,458	63,553	57,387	48,864	44,463
1916-17.....	42,628	40,889	54,660	57,418	60,470	62,026	59,534	48,721	44,916	39,317	25,756	28,896
1917-18.....	14,209	5,819	5,058	7,759	14,908	21,031	17,532	13,869	9,739	5,381	2,194	1,146
1918-19.....	785	17,155	48,821	96,886	122,604	121,561	119,711	130,613	118,219	92,546	49,502	37,702
1919-20.....	8,681	20,903	56,828	84,809	98,352	89,742	75,363	60,359	50,875	45,896	42,784	37,101
1920-21.....	17,777	17,487	19,554	27,391	35,500	43,149	43,063	32,555	27,822	18,463	13,488	8,334
1921-22.....	8,061	24,658	38,741	52,795	56,595	47,763	.....	.....	.....	.....	.....	.....

¹ Compiled from Chicago Daily Trade Bulletin.TABLE 38.—Wheat: Yearly movements and local consumption at primary markets, 1910 to 1921.¹

[In thousands of bushels, i. e., 000 omitted.]

ALL PRIMARY MARKETS.

Year.	Supply at beginning of year.	Re-ceipts.	Ship-ments.	Supply at end of year.	Local con-sump-tion.	Year.	Supply at beginning of year.	Re-ceipts.	Ship-ments.	Supply at end of year.	Local con-sump-tion.
1910-11.....	12,034	222,783	124,478	23,863	86,476	1916-17.....	42,628	374,754	266,500	14,209	136,673
1911-12.....	23,863	231,322	130,055	23,350	101,780	1917-18.....	14,209	177,551	80,717	785	110,258
1912-13.....	23,350	382,409	238,024	30,163	137,572	1918-19.....	785	439,088	285,874	8,681	145,318
1913-14.....	30,163	310,283	205,938	13,248	121,260	1919-20.....	8,681	402,643	227,729	19,799	163,796
1914-15.....	13,248	432,055	304,201	7,948	133,154	1920-21.....	19,799	401,076	222,806	11,621	186,448
1915-16.....	7,948	513,476	313,886	42,628	164,910	1921-22.....	43,063	416,179	293,406	49,463	116,368

¹ Compiled from Chicago Daily Trade Bulletin.

TABLE 39.—Wheat: Summary in per cent of carloads graded by licensed inspectors for yearly periods, all inspection points. Total of all classes and subclasses under each grade.

1917-18 TO 1920-21.

Crop year.	Receipts.						Shipments.					
	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	S. G.	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	S. G.
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
1917-18.....	23.2	34.4	22.3	8.9	5.3	5.9	23.6	34.2	23.3	8.5	5.7	4.7
1918-19.....	48.2	32.7	10.2	4.3	1.6	3.0	69.1	24.6	3.9	1.2	.4	.8
1919-20.....	7.5	31.8	31.0	16.7	8.2	4.8	5.8	51.7	31.7	6.8	2.3	1.7
1920-21.....	23.3	36.8	18.9	7.6	5.8	7.6	11.3	70.8	11.3	2.4	2.2	2.0

JULY, 1920, TO JUNE, 1921, BY CLASSES.

Hard red spring.....	33.4	13.0	18.5	12.3	13.3	9.5	26.6	25.6	24.6	7.4	10.3	5.5
Durum.....	12.5	51.4	22.0	9.3	3.1	1.7	.8	86.4	10.2	1.4	.6	.6
Hard red winter.....	22.0	41.4	18.4	5.5	4.8	6.9	9.3	77.4	9.5	1.4	1.1	1.3
Soft red winter.....	20.0	44.6	16.5	5.8	2.3	10.8	15.1	76.1	6.1	.6	.3	1.8
Common white.....	7.9	52.5	22.7	10.3	3.2	3.4	8.5	76.6	8.4	3.5	.6	2.4
White club.....	13.1	42.9	33.3	8.0	1.4	1.3	10.5	79.3	9.5	.5	.2	.....
Mixed wheat.....	19.1	42.2	20.9	8.1	3.3	6.4	5.4	79.1	10.2	2.7	1.1	1.5

WHEAT—Continued.

TABLE 40.—Wheat: Production and disposition of crop, United States, 1910 to 1921.

[In millions of bushels; i e., 000 omitted.]

Year	Production.			Quality.	On hand July 1.	Total supply.	Seed- ing.	Carry- over.	Ex- ports.	Re- main- ing for con- sump- tion.	Canadian.	
	Winter wheat.	Spring wheat.	Total.								Crop.	Ex- port. ¹
1910.....	434	201	635	<i>P. ct.</i> 0.93	88	723	77	92	99	482	132	61
1911.....	430	191	621	.88	92	713	72	78	80	483	231	77
1912.....	400	330	730	.90	78	808	71	90	143	504	224	104
1913.....	523	240	763	.93	90	853	82	76	146	549	232	132
1914.....	685	206	891	.90	76	967	86	55	332	494	161	91
1915.....	674	352	1,026	.88	55	1,081	84	163	243	591	394	177
1916.....	480	156	636	.87	163	² 824	80	48	204	492	263	227
1917.....	413	224	637	.92	48	² 708	95	17	133	463	234	186
1918.....	565	356	921	.93	17	938	100	54	287	497	189	100
1919.....	732	209	941	.82	54	995	90	108	220	567	193	114
1920.....	578	209	787	.86	151	938	90	88	365	464	270	144
1921.....	587	208	795	.87	79	874						

¹ includes wheat flour in terms of wheat Calendar years.² includes imports.

TABLE 41.—Wheat crop classified by grades.

[Based upon estimate of about 5,000 mill and elevator operators.]

SPRING WHEAT.

State.	No. 1.		No. 2.		No. 3.		No. 4.		No. 5.		Under 5.	
	1921	1920	1921	1920	1921	1920	1921	1920	1921	1920	1921	1920
Wisconsin.....	2.7	5.7	16.5	15.2	25.1	25.4	25.6	20.8	19.7	18.8	10.4	14.1
Minnesota.....	5.6	6.8	12.3	8.0	30.9	14.5	28.9	19.8	17.0	27.5	5.3	23.4
Iowa.....	3.1	4.2	15.2	27.9	19.2	25.5	19.7	18.8	15.8	12.2	25.9	
North Dakota.....	14.0	31.7	22.2	18.9	29.7	18.0	20.5	14.1	10.0	10.6	3.6	6.7
South Dakota.....	15.7	2.5	22.7	5.3	30.5	8.9	17.0	14.9	9.9	19.9	4.2	48.5
Nebraska.....	11.2	7.3	29.6	14.1	26.9	17.1	17.4	15.8	9.4	14.8	5.5	30.9
Montana.....	74.7	64.6	18.2	20.7	5.6	10.1	1.4	3.1	.1	.9		.6
Wyoming.....	70.0	30.8	19.3	27.5	10.7	22.5		15.0		3.9		.3
Colorado.....	38.3	33.0	37.3	30.5	13.8	19.4	7.2	8.7	1.5	4.7	1.9	3.7
New Mexico.....		41.7		32.5		19.2		4.2		2.1		.3
Utah.....	33.6	25.9	40.1	51.6	17.1	17.2	5.6	5.0	3.4	.3	.2	.0
Idaho.....	37.3	26.9	41.5	49.6	13.5	15.7	3.8	3.4	2.7	1.8	1.2	2.6
Washington.....	22.0	20.0	44.2	36.4	25.9	28.5	5.9	10.9	1.2	3.1	.8	1.1
Oregon.....	50.0	45.3	37.6	33.9	9.6	14.1	2.3	4.1	.5	1.8		.8
United States.....	24.1	24.0	25.6	20.8	24.2	16.6	15.1	12.8	7.9	11.8	3.1	14.0

WINTER WHEAT.

New York.....	13.6	18.4	48.4	57.1	25.4	18.8	7.6	4.6	2.7	0.9	2.3	0.2
Pennsylvania.....	12.3	13.4	48.6	52.2	27.5	22.3	8.1	7.9	2.3	2.9	1.2	1.3
Maryland.....	12.2	25.1	39.8	45.2	25.5	19.0	14.2	7.6	5.5	2.0	2.8	1.1
Virginia.....	16.2	42.5	49.8	40.7	19.3	11.8	9.8	3.4	3.3	.4	1.6	1.2
Ohio.....	6.9	22.4	41.0	48.1	33.2	20.1	13.1	6.7	4.2	1.7	1.6	1.0
Indiana.....	5.7	14.4	36.9	50.1	35.7	22.9	14.4	8.7	4.9	2.4	2.4	1.5
Illinois.....	8.3	22.2	43.9	47.8	29.4	19.9	12.9	7.1	3.5	2.0	2.0	1.0
Michigan.....	12.6	20.2	49.3	50.4	26.3	19.2	8.2	6.5	2.5	2.3	1.1	1.4
Iowa.....	9.8	15.7	44.6	45.1	30.6	28.1	10.6	7.7	2.4	2.1	2.0	1.3
Missouri.....	3.8	19.7	24.2	47.8	35.0	21.1	22.8	8.0	9.2	2.4	5.0	1.0

WHEAT—Continued.

TABLE 41.—*Wheat crop classified by grades—Continued.*

WINTER WHEAT—Continued.

State.	No. 1.		No. 2.		No. 3.		No. 4.		No. 5.		No. 6.	
	1921	1920	1921	1920	1921	1920	1921	1920	1921	1920	1921	1920
Nebraska.....	23.4	21.4	47.0	42.9	21.8	20.9	5.9	9.4	1.6	3.5	.3	1.9
Kansas.....	24.2	38.4	39.9	36.2	21.5	16.7	9.8	5.9	3.3	2.3	1.3	.5
Kentucky.....	4.3	10.5	35.2	42.3	35.6	23.3	16.9	12.8	6.3	6.1	1.7	5.0
Tennessee.....	8.2	9.8	39.4	42.6	32.6	29.3	13.5	12.5	4.2	3.9	2.1	1.9
Texas.....	13.7	23.3	27.5	21.3	35.7	17.7	14.7	16.5	6.3	12.2	2.1	9.0
Oklahoma.....	9.2	32.4	34.7	41.8	34.2	16.8	14.0	6.2	5.7	2.0	2.2	.8
Montana.....	68.1	68.4	20.6	20.9	8.7	8.5	1.6	1.4	.5	.4	.5	.4
Colorado.....	48.0	56.6	31.3	30.3	12.8	9.5	4.5	2.9	2.1	.4	1.3	.3
Idaho.....	29.9	32.9	50.4	52.6	13.1	12.5	2.4	1.8	.6	.2	3.6	.0
Washington.....	36.9	37.4	45.4	42.6	14.3	16.7	3.0	2.3	.0	1.0	.4	.0
Oregon.....	49.4	41.3	34.0	40.9	11.2	11.2	4.4	3.8	.9	1.4	1.1	1.4
California.....	56.7	42.1	26.3	30.4	11.8	16.0	2.4	6.5	2.1	3.1	.7	1.9
United States.....	19.7	29.5	39.9	42.0	25.1	18.2	10.2	6.7	3.5	2.4	1.6	1.2

TABLE 42.—*Wheat, including flour: International trade, calendar years, 1909–1920.¹*

"Temporary" imports into Italy of wheat to be used for manufacturing products for export are included in the total imports as given in the official Italian return. In the trade returns of Chile the item trigo mote (prepared corn) which might easily be confused with trigo (wheat) is omitted. See "General note," Table 17.

Country.	Average, 1909–1913.		1918.		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORTING COUNTRIES.	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>
Argentina.....	3	95,243	3	119,029	4	137,356	.....	.....
Australia.....	7	49,732	3	66,760	4	106,247	.....	.....
British India.....	541	51,510	302	24,144	7,730	2,524	152	5,756
Bulgaria.....	39	11,244	.....	.....	.....	17	.....	668
Canada.....	426	90,871	333	93,247	114	113,586	226	144,345
Chile.....	170	2,593	.....	.....	.....	.....	.....	.....
Rumania.....	178	52,370	110	4,370	104	2,648	44	1,365
Russia.....	5,924	161,766	.....	.....	8,614	1	.....	105
United States.....	1,537	100,810	17,788	208,857	7,986	267,111	39,412	307,630
PRINCIPAL IMPORTING COUNTRIES.								
Belgium.....	73,967	22,694	.....	.....	12,323	847	33,868	331
Brazil.....	20,495	.....	18,499	.....	22,404	.....	15,879	.....
British South Africa.....	6,397	258	1,824	171	2,137	162	8,711	.....
Denmark.....	6,711	523	353	13	893	509	1,159	119
Finland.....	4,912	(²)	45	.....	2,987	.....	1,660	.....
France.....	38,698	1,529	72,922	870	86,630	1,232	87,770	1,172
Germany.....	89,755	21,149	.....	.....	.....	.....	24,572	910
Greece.....	7,084	2	6,702	.....	11,551	.....	16,918	.....
Italy.....	52,866	3,273	78,671	323	95,503	913	79,875	1,579
Japan.....	3,495	25	2,874	2,869	11,543	2	7,086	94
Netherlands.....	76,653	54,394	2,245	21	18,129	264	20,194	1,095
Portugal.....	3,228	216	1,710	8	4,218	7	.....	.....
Spain.....	4,471	65	6,939	982	13,426	1,000	18,689	721
Sweden.....	7,140	20	2,402	46	4,079	60	8,096	30
Switzerland.....	18,885	109	7,406	(²)	13,148	211	12,241	272
United Kingdom.....	219,156	4,514	175,460	481	178,612	644	234,475	690
Other countries.....	57,838	20,784	17,479	17,103	27,268	31,329	44,141	4,094
Total.....	700,526	745,194	414,070	539,294	529,407	666,670	655,178	471,078

¹ Does not include statistics of trade for Austria-Hungary, Belgium, and Germany during the war period, 1914–1918. Therefore the total trade statistics of imports and exports for all countries are not strictly comparable during that period.

² Less than 500.

OATS.

TABLE 43.—Oats: Area and production in undermentioned countries, 1909–1921.

Country.	Area.				Production			
	Average 1909–1913. ¹	1919	1920	1921	Average 1909–1913. ¹	1919	1920	1921
NORTH AMERICA.								
United States.....	1,000 acres 37,357	1,000 acres 40,359	1,000 acres 42,491	1,000 acres 44,826	1,000 bushels 1,131,175	1,000 bushels. 1,184,630	1,000 bushels. 1,496,251	1,000 bushels. 1,060,737
Canada:								
New Brunswick..	204	305	309	285	5,933	9,261	9,118	7,118
Quebec.....	1,451	2,141	2,206	2,367	40,294	57,275	66,729	50,591
Ontario.....	2,964	2,674	2,880	3,095	105,036	78,388	129,171	72,575
Manitoba.....	1,379	1,847	1,874	2,226	54,192	57,698	57,657	49,442
Saskatchewan..	2,293	4,838	5,107	5,682	98,481	112,157	141,549	170,513
Alberta.....	1,223	2,767	3,090	2,912	52,045	65,725	115,091	64,192
Other.....	326	380	384	383	11,697	13,883	11,395	11,801
Total Canada..	9,840	14,952	15,850	16,950	367,678	394,387	530,710	426,232
Mexico.....					17			
Total North America.....	47,197				1,498,870			
SOUTH AMERICA.								
Argentina.....	1,999	3,080	2,301	2,061	52,122	33,762	57,113	47,606
Chile.....	68	79		56	2,934	3,250	3,250	2,715
Uruguay.....	46	85	81	76	830	1,288	1,479	1,986
Total South America....	2,113	3,244		2,193	55,886	38,300	61,842	52,300
EUROPE.								
Austria.....	2 4,613	606	627	664	2 143,392	13,581	15,974	18,776
Croatia-Slavonia ²	246				5,216			
Bosnia Herzegovina ²	225				4,973			
Belgium.....	644	561	556	603	40,905	27,361	33,865	30,251
Bulgaria.....	2 455	302	332	407	2 9,880	7,387	10,125	11,271
Czechoslovakia.....		1,375	1,881	2,003		2 46,099	59,654	72,351
Denmark.....	1,028	997	1,091	1,112	43,115	47,583	50,794	52,016
Finland.....	4 957	1,013	1,013	1,038	21,989	24,133	24,561	28,029
France.....	2 9,801	7,296	8,278	8,298	2 310,020	179,825	291,406	245,206
Germany.....	2 10,750	7,996	8,015	7,882	2 591,996	308,587	335,521	324,880
Greece.....		155	273			2,749	2,966	4,134
Hungary.....	2 2,609		802	806	2 85,840		22,307	20,140
Italy.....	1,253	1,129	1,159	1,198	36,945	34,685	24,222	37,774
Luxemburg.....	77	62	62	62	3,382	1,699	1,849	1,550
Netherlands.....	346	389	395	378	18,512	20,392	22,156	21,289
Norway.....	266	343	342	342	10,245	15,106	15,078	12,742
Rumania.....	2 1,103	2 952	2,165	2,167	2 27,545	2 22,524	54,343	62,211
Russia Proper ²	38,013				874,945			
Poland.....	2 2,858	2 2,440	4,119	4,738	2 76,590	2 76,281	129,061	149,788
Northern Caucasus ²	1,190				29,602			
Serbia ²	266				5,443			
Spain.....	1,276	1,695	1,588	1,527	29,110	32,915	37,772	40,035
Sweden.....	1,909	1,762	1,758	1,737	79,115	76,501	70,616	67,585
Switzerland.....	51	57	56	52	4,784	2,770	3,113	3,036
Yugoslavia.....			1,035			742,192	726,354	
United Kingdom:								
England.....	1,835	2,252	2,017	1,932	74,750	80,416	78,768	74,136
Wales.....	204	312	249	215	7,274	10,920	7,200	6,040
Scotland.....	952	1,111	1,032	1,011	37,670	42,440	41,256	46,732
Ireland.....	1,049	1,442	1,332	1,254	65,083	85,540	65,388	56,238
Total United Kingdom....	4,040	5,117	4,630	4,412	182,777	219,316	192,612	183,146
Total Europe..	84,158				2,636,321			
ASIA.								
Cyprus.....					429			
Russia (Asiatic) ²	4,912				87,403			

¹ Five-year average except in a few cases where statistics were unavailable.² Old boundaries.³ Bohemia, Moravia, and Silesia.⁴ 1910 Census.⁵ Former Kingdom, Bessarabia and Bukovina.⁶ Former Russian Poland, Western Galicia, and Posen.⁷ Unofficial.

OATS—Continued.

TABLE 43.—*Oats: Area and production in undermentioned countries, 1909–1921—Con.*

Country.	Area				Production.			
	Average 1909–1913.	1919	1920	1921	Average 1909–1913.	1919	1920	1921
AFRICA	1,000 acres.	1,000 acres.	1,000 acres.	1,000 acres.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.
Algeria.....	456	533	574	553	12,350	10,634	6,855	11,412
Tunis.....	141	138	149	165	4,333	3,445	1,481	5,167
Union of South Africa.....	.....	641	558	564	7,197	6,689	4,985	7,789
Total Africa.....	.....	1,312	1,281	1,287	24,480	20,768	13,321	24,368
AUSTRALASIA.								
Australia:								
Queensland.....	2	(⁸)	(⁸)	.....	47	4	3	.....
New South Wales.....	75	⁹ 87	⁹ 77	.....	1,571	⁹ 1,273	⁹ 590	.....
Victoria.....	388	343	360	.....	8,392	5,275	6,603	.....
South Australia.....	101	161	192	.....	1,371	1,541	1,634	.....
Western Australia.....	81	141	192	.....	1,204	1,500	2,487	.....
Tasmania.....	61	36	48	.....	2,066	848	1,212	.....
Total Australia.....	708	768	1,069	.....	14,851	10,441	12,559	.....
New Zealand.....	376	173	180	148	13,664	6,885	8,492	5,225
Total Australasia.....	1,084	941	1,249	.....	28,515	17,326	21,051	.....
Grand total.....	140,061	.....	.....	.....	4,331,904	.....	.....	.....

⁸ Less than 500 acres.⁹ Including Federal TerritoryTABLE 44.—*Oats: Total production in countries as far as reported, 1895–1921.*

Year.	Production.	Year.	Production.	Year.	Production.	Year.	Production.
	<i>Bushels.</i>		<i>Bushels.</i>		<i>Bushels.</i>		<i>Bushels.</i>
1895.....	3,008,154,000	1902.....	3,626,303,000	1909.....	4,312,882,000	1916.....	3,484,071,000
1896.....	2,847,115,000	1903.....	3,378,084,000	1910.....	4,182,410,000	1917.....	3,006,747,000
1897.....	2,633,971,000	1904.....	3,611,302,000	1911.....	3,808,561,000	1918.....	3,112,522,000
1898.....	2,903,974,000	1905.....	3,510,167,000	1912.....	4,617,394,000	1919.....	2,857,897,000
1899.....	3,256,256,000	1906.....	3,544,961,000	1913.....	4,697,437,000	1920.....	3,548,621,000
1900.....	3,166,002,000	1907.....	3,603,896,000	1914.....	4,034,857,000	1921.....	2,955,079,000
1901.....	2,862,615,000	1908.....	3,591,012,000	1915.....	4,306,550,000		

TABLE 45.—*Oats: Average yield per acre in undermentioned countries, 1890–1921.*

Year.	United States.	Russia (Euro- pean).	Ger- many.	Austria.	Hungary Proper.	France.	United King- dom. ¹
Average:	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1890–1899.....	26.1	17.8	40.0	25.3	.....	29.8	43.6
1900–1909.....	29.3	20.0	50.7	29.8	30.7	33.0	44.3
1910–1919.....	32.1	* 22.2	47.5	29.3	* 34.8	32.8	43.1
1919.....	29.3	.....	41.9	22.4	.....	24.6	42.9
1920.....	35.2	.....	41.9	25.5	27.8	35.2	41.6
1921.....	23.7	.....	41.2	28.3	25.0	29.6	41.5

¹ Winchester bushels.

* Seven-year average.

* Six-year average.

OATS—Continued.

TABLE 46.—Oats: Acreage, production, value, exports, etc., in the United States, 1849–1921.

[See headnote of Table 4.]

Year.	Acreage harvested (000 omitted).	Average yield per acre.	Production (000 omitted).	Average farm price per bushel Dec. 1.	Farm value Dec. 1 (000 omitted).	Chicago cash price per bushel, No. 1 northern spring. ¹				Domestic exports, including flour, fiscal year beginning July 1. ²	Imports, including flour, fiscal year beginning July 1. ³
						December.		Following May.			
						Low.	High.	Low.	High.		
	Acres.	Bush.	Bushels.	Cents.	Dollars.	Cts.	Cts.	Cts.	Cts.	Bushels.	Bushels.
1849.....			146,584								
1850.....			172,648								
1866-1875.....	9,680	28.2	272,993	37.5	102,423	38	42	45	52	546,033	732,615
1876-1885.....	17,143	27.4	469,856	32.5	152,594	29	33	33	38	3,106,723	366,123
1886-1895.....	27,482	26.1	717,149	28.9	207,040	27	29	28	32½	5,607,237	111,587
1896.....	29,645	26.3	780,563	18.3	143,192	16½	18½	16½	18½	37,725,083	131,204
1897.....	28,353	27.9	791,591	20.8	164,886	21	23½	26	32	73,890,307	25,093
1898.....	28,769	29.3	842,747	25.2	212,482	26	27½	24	27½	33,534,362	28,098
1899.....	29,540	31.3	925,555	24.5	226,588	22½	23	21½	23½	45,048,857	54,576
1900.....	30,290	29.9	904,566	25.4	230,160	21½	22½	27½	31	42,268,931	32,107
1901.....	29,894	26.0	778,531	40.0	311,374	42	48½	41	49½	13,277,612	38,978
1902.....	30,578	34.5	1,055,441	30.6	322,944	29½	32	33½	38½	8,381,805	150,065
1903.....	30,866	27.5	848,824	33.8	286,879	34½	38	39½	44½	1,960,740	183,983
1904.....	31,353	32.1	1,007,183	31.0	312,467	28½	32	28½	32	3,394,692	55,699
1905.....	32,072	33.3	1,068,780	28.8	308,086	29½	32½	32½	34½	48,434,541	40,025
1906.....	33,353	31.0	1,034,623	31.8	329,142	33	35½	44½	48½	6,386,334	91,289
1907.....	33,641	24.0	807,308	44.3	357,340	46½	50½	52½	56½	2,518,855	383,418
1908.....	34,006	24.9	847,109	47.3	400,863	48½	50½	56½	62½	2,333,817	6,691,700
1909.....	55,159	30.4	1,068,289	40.6	433,869	40	45	36½	43½	2,548,726	1,034,511
1910.....	37,548	31.6	1,186,341	34.4	408,388	31	32½	31½	36	3,845,850	107,318
1911.....	37,763	24.4	922,298	45.0	414,663	46½	47½	50½	58	2,677,749	2,622,357
1912.....	37,917	37.4	1,418,337	31.9	452,469	31	31½	35½	43	36,455,474	723,899
1913.....	38,399	29.2	1,121,768	39.2	439,596	37½	40½	37	42½	2,748,743	22,273,624
1914.....	38,442	29.7	1,141,060	43.8	499,431	46½	49½	50½	56	100,609,272	630,722
1915.....	40,996	37.8	1,549,030	36.1	559,506	40½	44	39½	49½	98,960,481	665,314
1916.....	41,527	30.1	1,251,837	52.4	655,928	46½	54	59½	74	95,105,698	761,644
1917.....	43,553	36.6	1,592,740	66.6	1,061,474	70½	80½	72	79½	125,090,611	2,591,077
1918.....	44,349	34.7	1,538,124	70.9	1,090,322	68	74½	67½	74½	109,004,734	551,355
1919.....	40,359	29.3	1,184,030	70.4	833,922	77	89	100½	117½	43,435,994	6,043,834
1920.....	42,491	35.2	1,496,281	46.0	688,311	47	52	.....	.....	9,391,096	3,795,638
1921.....	44,826	23.7	1,060,737	30.3	321,540	32½	42	.....	.....	.....	.....

¹ Quotations are for No. 2 to 1906.² Oatmeal not included until 1882.³ Oatmeal not included 1867–1882, and 1909.⁴ Acreage adjusted to census basis.⁵ Preliminary estimate.

OATS—Continued.

TABLE 47.—Oats: Acreage, production, and total farm value, by States, 1919–1921.

State.	Thousands of acres.			Production (thousands of bushels)			Total value, basis Dec. 1 price (thousands of dollars).		
	1919	1920	1921 ¹	1919	1920	1921 ¹	1919	1920	1921 ¹
Maine.....	117	119	124	3,978	4,974	4,340	3,660	4,228	2,387
New Hampshire.....	18	18	18	594	702	630	505	526	378
Vermont.....	83	81	81	2,418	2,835	2,673	2,203	2,126	1,577
Massachusetts.....	9	9	9	297	306	279	267	215	165
Rhode Island.....	1	1	1	30	28	28	28	22	17
Connecticut.....	11	11	11	324	330	330	285	218	198
New York.....	1,008	1,059	1,038	25,704	40,772	24,912	21,334	27,317	11,709
New Jersey.....	71	72	72	2,130	2,304	1,728	1,704	1,728	778
Pennsylvania.....	1,176	1,210	1,238	36,456	47,190	35,283	29,165	31,145	15,877
Delaware.....	6	7	6	138	231	168	124	162	77
Maryland.....	49	50	60	1,372	1,625	1,620	1,125	1,138	729
Virginia.....	160	148	163	3,520	3,241	3,342	3,520	2,625	1,872
West Virginia.....	180	200	210	3,780	5,400	4,620	3,410	4,286	2,462
North Carolina.....	170	154	170	2,839	3,388	3,060	3,009	3,252	2,142
South Carolina.....	298	307	338	6,854	7,368	8,112	7,539	7,589	5,922
Georgia.....	310	344	412	6,200	7,224	8,652	7,130	7,502	5,537
Florida.....	40	41	41	600	607	533	720	418	346
Ohio.....	1,452	1,540	1,614	47,916	68,068	37,122	31,500	34,031	12,350
Indiana.....	1,750	1,875	1,878	56,000	76,875	45,072	38,640	35,362	13,071
Illinois.....	4,291	4,334	4,594	128,730	171,193	121,711	90,111	73,613	35,305
Michigan.....	1,515	1,485	1,544	37,875	58,806	28,101	26,801	28,227	10,116
Wisconsin.....	2,348	2,408	2,632	75,423	107,878	63,958	54,896	52,660	21,106
Minnesota.....	3,526	3,702	3,924	98,728	138,825	94,176	63,186	49,977	21,660
Iowa.....	5,566	5,894	5,960	192,584	229,866	154,960	123,251	82,752	35,641
Missouri.....	1,707	1,918	2,148	46,089	58,499	42,960	32,723	28,665	12,888
North Dakota.....	2,397	2,518	2,619	37,154	60,432	49,761	21,893	21,151	10,450
South Dakota.....	1,963	2,219	2,650	56,927	75,446	58,300	35,864	24,897	11,660
Nebraska.....	2,133	2,400	2,585	69,962	83,040	70,054	45,475	30,725	14,711
Kansas.....	1,554	2,127	1,804	43,667	65,299	38,827	31,877	25,467	10,433
Kentucky.....	280	280	293	6,300	6,580	5,567	5,733	4,803	2,672
Tennessee.....	220	250	260	4,070	4,950	5,330	3,785	3,561	2,558
Alabama.....	222	246	308	3,906	4,423	6,776	4,196	3,897	4,404
Mississippi.....	150	128	147	2,400	2,176	2,940	2,520	1,893	1,882
Louisiana.....	50	50	55	1,100	1,150	1,265	1,100	943	886
Texas.....	1,863	1,490	1,805	78,246	32,780	33,570	50,077	21,635	13,092
Oklahoma.....	1,573	1,650	1,765	50,336	54,450	35,300	35,235	23,958	9,531
Arkansas.....	280	290	300	6,160	7,250	6,600	5,421	5,655	2,970
Montana.....	579	533	469	3,474	11,726	10,787	3,161	5,980	3,668
Wyoming.....	100	115	150	1,200	4,370	4,500	1,341	2,709	1,710
Colorado.....	174	204	217	4,559	6,426	6,727	4,103	3,856	2,220
New Mexico.....	55	61	61	1,507	1,671	1,690	1,432	1,337	811
Arizona.....	13	13	18	455	351	630	455	337	410
Utah.....	62	77	79	1,730	2,603	2,876	1,695	2,082	1,064
Nevada.....	3	3	3	76	112	113	76	134	85
Idaho.....	185	185	180	5,550	7,030	7,740	5,439	4,750	2,477
Washington.....	210	210	210	8,400	9,786	10,500	7,812	7,046	4,410
Oregon.....	284	300	272	8,889	10,950	8,704	8,178	7,118	3,308
California.....	147	155	140	4,263	4,650	3,780	4,092	3,720	1,928
United States..	40,359	42,491	44,826	1,184,030	1,496,281	1,060,737	833,922	688,311	321,510

¹ Preliminary estimate.

OATS—Continued.

TABLE 48.—Oats: Condition of crop, United States, on first of months named, 1901–1921.

Year.	June.	July.	August.	When har-vested.	Year.	June.	July.	August.	When har-vested.	Year.	June.	July.	August.	When har-vested.
1901....	85.3	83.7	73.6	72.1	1908....	92.9	85.7	76.8	69.7	1915....	92.2	93.9	91.6	91.1
1902....	90.6	92.1	89.4	87.2	1909....	88.7	88.3	85.5	83.3	1916....	86.9	86.3	81.5	78.0
1903....	85.5	84.3	79.5	75.7	1910....	91.0	82.3	81.5	83.3	1917....	88.8	89.4	87.2	90.4
1904....	89.3	89.8	86.6	85.6	1911....	85.7	68.2	65.7	64.5	1918....	93.2	85.5	82.8	84.4
1905....	92.9	92.1	90.8	90.3	1912....	91.1	89.2	90.3	92.3	1919....	93.2	87.0	76.5	73.1
1906....	85.9	84.0	82.8	81.9	1913....	87.0	76.3	73.8	74.0	1920....	87.8	84.7	87.2	88.3
1907....	81.6	81.0	75.6	65.5	1914....	89.5	84.7	79.4	75.8	1921....	85.7	77.6	64.5	61.1

TABLE 49.—Oats: Forecast of production, monthly, with preliminary and final estimates.

[000 omitted.]

Year.	June.	July.	August.	Septem-ber.	October production estimate.	Final estimate.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1912.....	1,109,000	1,139,000	1,207,000	1,290,000	1,417,172	1,418,337
1913.....	1,104,000	1,031,000	1,028,000	1,066,000	1,122,139	1,121,768
1914.....	1,216,223	1,199,805	1,153,240	1,115,548	1,139,741	1,141,060
1915.....	1,287,854	1,398,996	1,402,100	1,407,670	1,517,478	1,549,030
1916.....	1,254,834	1,316,867	1,274,028	1,231,042	1,229,182	1,251,837
1917.....	1,380,593	1,452,907	1,456,138	1,533,476	1,580,714	1,592,740
1918.....	1,500,049	1,436,617	1,427,596	1,477,348	1,535,297	1,538,124
1919.....	1,439,991	1,396,637	1,260,463	1,218,935	1,219,521	1,184,030
1920.....	1,315,476	1,322,065	1,402,064	1,441,839	1,444,411	1,496,281
Average.....	1,289,730	1,299,322	1,290,070	1,309,095	1,356,184	1,365,912
1921.....	1,404,922	1,328,937	1,137,202	1,090,282	1,078,519	1,060,737

¹ Preliminary.

TABLE 50.—Oats: Production and distribution in the United States, 1897–1921.

[000 omitted under bushels.]

Year.	Old stock on farms Aug. 1.	Crop.			Total supplies.	Stock on farms Mar. 1 following.	Shipped out of county where grown.
		Quantity.	Weight per bushel.	Quality.			
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Pounds.</i>	<i>Per cent.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1897-1901.....	53,631	754,358	30.2	86.9	807,989	273,014	201,387
1902-1906.....	53,928	916,931	31.0	87.7	970,859	350,013	257,540
1907.....	68,258	754,443	29.4	77.0	822,701	267,476	210,923
1908.....	37,797	807,156	29.8	81.3	844,953	278,847	244,444
1909.....	26,323	1,007,143	32.7	91.4	1,033,466	365,438	329,255
1910.....	64,200	1,186,341	32.7	93.8	1,250,541	442,665	363,103
1911.....	67,801	922,298	31.1	84.6	990,099	289,989	265,944
1912.....	34,875	1,418,337	33.0	91.0	1,453,212	604,249	438,130
1913.....	103,916	1,121,768	32.1	89.1	1,225,684	419,481	297,365
1914.....	62,467	1,141,060	31.5	86.5	1,203,527	379,369	335,539
1915.....	55,607	1,549,030	33.0	87.5	1,604,637	598,148	465,823
1916.....	113,728	1,251,837	31.2	88.2	1,365,565	394,211	355,092
1917.....	47,834	1,592,740	33.4	95.1	1,640,574	599,208	514,117
1918.....	81,424	1,538,124	33.2	93.6	1,619,548	590,251	421,568
1919.....	93,045	1,184,030	31.1	84.7	1,277,075	409,730	312,364
1920.....	54,819	1,496,281	33.1	93.3	1,551,100	683,759	431,687
1921.....	161,108	1,060,737	28.3	74.7	1,221,845	404,461	252,980

OATS—Continued.

TABLE 51.—Oats: Yield per acre, price per bushel Dec. 1, and value per acre, by States.

State.	Yield per acre (bushels).					Farm price per bushel (cents).										Value per acre (dollars). ¹			
	5-year average 1917-1921.	1917	1918	1919	1920	1921	10-year average 1912-1921.	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	5-year average 1916-1920.	1921
Maine.....	36.0	29.0	40.0	34.0	41.8	35.0	68	51	55	57	45	67	85	90	92	85	55	30.32	19.25
New Hampshire.....	36.6	38.0	33.0	33.0	39.0	35.0	68	48	56	58	54	69	84	87	85	75	60	29.56	21.00
Vermont.....	34.9	36.0	41.0	29.5	35.0	33.0	67	48	52	55	53	65	85	90	90	75	59	28.22	19.47
Massachusetts.....	35.0	37.0	40.0	33.0	34.0	31.0	68	47	54	56	51	66	81	91	90	80	59	28.88	13.29
Rhode Island.....	31.8	31.0	42.0	30.0	28.0	28.0	67	45	50	58	50	68	75	90	95	80	60	26.06	16.80
Connecticut.....	32.1	33.0	38.0	29.5	30.0	30.0	68	49	55	55	55	60	79	90	88	75	60	25.89	18.00
New York.....	32.8	35.0	41.0	25.5	38.5	32.4	60	42	47	51	45	62	75	84	83	67	47	24.75	11.28
New Jersey.....	32.0	34.0	40.0	30.0	32.0	24.0	60	44	47	54	48	61	70	79	80	75	45	24.34	10.80
Pennsylvania.....	34.5	25.0	39.0	31.0	39.0	28.5	58	41	46	51	44	57	73	80	80	66	45	24.99	12.82
Delaware.....	30.2	32.0	35.0	23.0	33.0	28.0	63	45	51	50	51	62	78	87	90	70	46	23.56	12.88
Maryland.....	30.3	31.0	33.0	28.0	32.5	27.0	61	45	48	52	49	61	75	86	82	70	45	23.07	12.15
Virginia.....	22.4	24.5	23.0	22.0	21.9	20.5	70	52	52	58	55	63	84	100	100	81	56	19.62	11.48
West Virginia.....	24.8	27.0	27.0	21.0	27.0	22.0	66	47	51	55	51	64	79	91	91	79	52	20.21	11.44
North Carolina.....	17.9	16.0	17.0	16.7	22.0	18.0	80	62	61	65	62	74	93	108	106	96	70	17.00	12.60
South Carolina.....	21.6	15.0	22.0	23.0	24.0	24.0	86	66	71	71	67	80	100	118	110	103	73	21.08	17.52
Georgia.....	19.6	16.0	20.0	20.0	21.0	21.0	87	65	68	70	66	79	117	119	115	108	64	20.72	13.44
Florida.....	15.4	14.0	18.0	15.0	17.0	13.0	81	70	70	70	70	71	98	115	120	60	65	14.65	8.45
Ohio.....	37.6	44.0	44.0	33.0	44.2	23.0	50	33	40	45	36	53	64	70	72	50	33	23.93	7.53
Indiana.....	36.2	42.0	42.0	32.0	41.0	24.0	47	30	38	43	34	51	63	67	69	46	29	22.17	6.96
Illinois.....	38.4	52.0	44.0	30.0	39.5	26.5	47	30	38	44	35	51	65	67	70	43	29	24.18	7.68
Michigan.....	31.8	36.0	40.0	25.0	39.6	18.2	49	33	39	45	35	53	64	69	71	48	36	20.66	6.55
Wisconsin.....	38.6	44.0	46.6	33.4	44.8	24.3	48	32	37	43	36	51	66	67	70	49	33	24.89	8.02
Minnesota.....	33.5	37.0	41.0	28.0	37.5	24.0	43	26	32	40	32	47	63	63	64	36	23	18.60	5.52
Iowa.....	37.7	47.0	42.0	34.6	39.0	26.0	43	27	34	41	32	48	63	64	64	36	23	22.09	5.98
Missouri.....	29.3	40.0	29.0	27.0	30.5	20.0	50	35	45	44	38	53	61	70	71	49	30	18.41	6.00
North Dakota.....	19.4	15.0	23.5	15.5	24.0	19.0	41	22	30	37	27	44	62	61	67	35	21	10.38	3.99
South Dakota.....	31.6	34.0	39.0	29.0	34.0	22.0	41	25	34	38	28	46	61	59	63	33	20	17.45	4.40
Nebraska.....	30.9	38.0	22.2	32.8	34.6	27.1	44	30	38	40	31	47	61	65	65	37	21	17.68	5.69
Kansas.....	26.5	31.0	22.0	28.1	30.7	20.5	49	35	45	42	37	55	64	73	73	39	27	16.26	5.54
Kentucky.....	23.0	26.0	24.0	22.5	23.5	19.0	64	44	52	53	48	60	76	90	91	73	48	18.32	0.12
Tennessee.....	21.8	25.0	25.0	18.5	19.8	20.5	66	47	53	53	50	62	83	93	93	78	48	17.98	9.84
Alabama.....	19.0	18.0	19.0	18.0	18.0	22.0	80	62	69	69	63	75	102	107	105	88	65	17.31	14.30
Mississippi.....	18.4	19.0	20.0	16.0	17.0	20.0	78	60	63	65	60	74	91	107	105	87	64	16.83	12.80
Louisiana.....	23.1	22.3	25.0	22.0	23.0	23.0	74	51	57	63	55	68	94	99	100	82	70	19.90	16.10
Texas.....	24.5	26.0	14.7	42.0	22.0	18.0	59	43	51	48	42	61	82	92	64	66	39	18.72	7.02
Oklahoma.....	26.4	23.0	24.0	32.0	33.0	20.0	51	34	45	41	35	57	73	84	70	44	27	16.29	5.40
Arkansas.....	24.5	28.0	25.5	22.0	25.0	22.0	65	50	53	53	52	68	75	88	88	78	45	19.32	9.90
Montana.....	20.2	20.0	30.0	6.0	22.0	23.0	52	35	32	39	32	47	81	80	91	51	34	14.95	7.82
Wyoming.....	31.4	36.0	41.0	12.0	38.0	30.0	60	37	40	48	43	60	80	112	62	38	23.92	11.40	
Colorado.....	31.3	38.0	30.0	26.2	31.5	31.0	57	38	44	45	41	60	76	80	90	60	33	23.03	10.23
New Mexico.....	28.1	30.0	28.0	27.4	27.4	27.7	66	45	60	45	50	67	84	89	95	80	48	23.50	13.30
Arizona.....	35.4	40.0	40.0	35.0	27.0	35.0	81	70	50	70	64	80	96	120	100	96	65	35.46	22.75
Utah.....	37.5	44.0	45.0	27.9	33.8	36.4	64	49	40	43	45	61	85	97	98	80	37	32.39	13.47
Nevada.....	35.6	40.0	38.0	25.3	37.2	37.7	81	52	65	55	55	75	96	118	100	120	75	37.09	28.28
Idaho.....	37.8	38.0	40.0	30.0	38.0	43.0	56	35	32	38	34	54	77	94	98	68	32	29.06	13.76
Washington.....	40.4	38.5	27.0	40.0	46.6	50.0	60	40	40	42	37	51	81	98	93	72	42	30.98	21.00
Oregon.....	30.0	25.0	25.0	31.3	36.5	32.0	58	41	38	45	37	49	75	96	92	65	33	23.76	12.16
California.....	30.6	35.0	32.0	29.0	30.0	27.0	70	55	60	53	50	72	83	94	96	80	51	27.01	13.77
United States.....	31.9	36.6	34.7	29.3	35.2	23.7	48.8	31.9	39.2	43.8	36.1	52.4	66.6	70.9	70.4	46.0	30.3	20.32	7.17

¹ Based upon farm price December 1.

OATS—Continued.

TABLE 52.—Oats: Farm price, cents per bushel on first of each month, 1908-1921.

Year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Average.
1908.....	46.1	47.0	47.9	50.0	50.4	51.8	50.2	49.8	47.2	47.2	46.5	47.2	47.9
1909.....	48.1	48.1	51.1	53.2	55.3	57.4	56.2	50.0	42.3	41.0	41.0	40.2	46.4
1910.....	42.8	45.0	46.0	45.6	43.3	43.0	42.1	41.7	38.4	36.2	34.9	34.4	39.9
1911.....	33.2	33.1	32.8	32.3	33.2	34.7	37.5	40.2	40.4	42.5	43.8	45.0	38.7
1912.....	45.1	47.5	49.8	52.0	56.0	55.3	52.5	44.3	35.0	33.6	33.6	31.9	41.4
1913.....	32.2	32.4	33.1	33.1	34.2	36.0	37.7	37.6	39.3	39.6	37.9	39.2	36.8
1914.....	39.1	39.3	38.9	39.5	39.5	40.0	38.8	36.7	42.3	43.3	42.9	43.8	40.9
1915.....	45.0	50.1	52.1	53.4	53.4	51.3	46.7	45.4	38.5	34.5	34.9	36.1	42.5
1916.....	39.1	44.6	42.7	42.0	42.6	42.1	40.4	40.1	43.1	44.5	49.0	52.4	44.0
1917.....	51.4	53.2	56.9	61.5	71.0	69.9	68.9	73.7	61.7	62.3	61.7	66.6	62.7
1918.....	73.9	78.7	86.2	88.9	86.0	78.1	76.3	73.0	70.3	71.0	68.2	70.9	74.6
1919.....	70.8	64.3	62.6	65.8	70.9	71.2	70.9	75.3	71.7	68.4	68.7	70.4	69.4
1920.....	78.2	82.7	84.5	90.7	98.3	102.9	104.5	81.9	70.2	60.7	54.5	46.0	74.0
1921.....	45.6	41.8	41.9	39.3	36.8	37.9	35.6	33.8	30.1	31.0	29.2	30.3	34.3
Average, 1912-1921.	52.0	53.7	54.9	56.6	58.9	58.5	57.2	54.2	50.2	48.9	48.1	48.8	52.1

TABLE 53.—Oats: Monthly marketings by farmers, 1916-1921.

Month.	Estimated amount sold monthly by farmers of United States (millions of bushels).						Per cent of year's sales.					
	1916-17	1917-18	1918-19	1919-20	1920-21	5-yr. aver.	1916-17	1917-18	1918-19	1919-20	1920-21	5-yr. aver.
July.....	31	24	34	47	36	34	8.3	4.7	8.0	14.4	8.3	8.7
August.....	87	82	82	60	80	78	23.3	16.4	19.6	18.4	18.7	19.3
September.....	51	67	50	33	59	52	13.5	13.5	11.9	10.1	13.8	12.5
October.....	40	56	42	30	41	42	10.7	11.1	9.9	9.2	9.5	10.1
November.....	30	38	30	19	24	28	8.0	7.7	7.2	5.8	5.5	6.8
December.....	21	39	28	27	25	28	5.7	7.8	6.7	8.3	5.8	6.9
January.....	28	42	28	26	28	30	7.5	8.3	6.7	8.2	6.6	7.5
February.....	20	40	19	21	28	26	5.3	8.0	4.5	6.6	6.6	6.2
March.....	20	35	23	16	26	24	5.2	7.1	5.5	4.9	6.0	5.7
April.....	14	33	27	14	20	22	3.8	6.5	6.3	4.3	4.6	5.1
May.....	17	20	29	17	29	22	4.4	4.0	7.0	5.2	6.8	5.5
June.....	16	24	28	15	34	23	4.3	4.9	6.7	4.6	7.8	5.7
Season...	375	500	420	325	430	409	100.0	100.0	100.0	100.0	100.0	100.0

OATS—Continued.

TABLE 54.—Oats: Extent and causes of yearly crop losses, 1909–1920.

Year.	Deficient mois- ture.	Excessive mois- ture.	Floods.	Frost and freeze	Hail.	Hot winds.	Storms.	Total climatic.	Plant disease.	Insect pests.	Animal pests.	Defective seed.	Total.
	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
1920.....	6.4	2.7	0.3	0.4	0.8	0.9	0.4	12.1	2.3	1.4	0.1	0.1	16.3
1919.....	11.5	5.7	.4	.4	.7	2.8	.4	22.3	4.9	2.2	(1)	.1	29.9
1918.....	12.9	.5	.2	1.3	.9	1.8	.3	18.1	1.1	.9	(1)	.2	20.7
1917.....	11.8	1.2	.2	2.7	.8	1.0	.3	18.2	.8	.4	(1)	(1)	19.8
1916.....	10.1	4.0	.4	.6	.8	2.8	.5	19.7	5.1	1.3	(1)	.1	27.2
1915.....	1.4	8.5	.9	.4	1.0	.1	.3	13.2	2.1	.3	(1)	.2	16.3
1914.....	15.7	2.2	.2	.3	.8	2.6	.4	22.7	2.0	1.7	.1	.1	27.6
1913.....	22.7	.7	.2	.2	.6	1.8	.2	27.2	.5	1.1	.1	.1	30.3
1912.....	7.2	3.1	.8	.5	1.0	1.1	.5	14.1	1.6	.7	.1	.2	17.7
1911.....	27.6	1.0	(1)	.5	.3	5.1	.1	35.4	.7	1.5	.1	.2	39.5
1910.....	17.0	.8	.2	.7	.4	1.7	.3	21.4	.9	.6	.2	.2	24.0
1909.....	7.9	5.2	.6	.8	1.1	.9	.8	17.7	2.4	.5	.1	.4	22.2
Average.....	12.7	3.0	.3	.7	.8	1.9	.4	20.2	2.0	1.0	.1	.2	24.3

¹ Less than .05 per cent.

TABLE 55.—Oats: Monthly and yearly average price per bushel of reported sales of No. 3 white, 1910–11 to 1921–22.

CHICAGO.¹

Crop year.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	Weighted average.
1910–11.....	\$0.35	\$0.34	\$0.32	\$0.32	\$0.32	\$0.33	\$0.31	\$0.31	\$0.32	\$0.34	\$0.39	\$0.44	\$0.33
1911–12.....	.41	.45	.47	.48	.47	.50	.52	.53	.57	.55	.53	.49	.55
1912–13.....	.33	.33	.33	.32	.33	.33	.33	.32	.35	.38	.40	.40	.35
1913–14.....	.42	.43	.40	.40	.40	.39	.39	.39	.39	.40	.40	.37	.40
1914–15.....	.42	.46	.46	.48	.49	.53	.58	.57	.57	.54	.49	.53	.50
1915–16.....	.41	.34	.36	.36	.42	.48	.45	.42	.44	.43	.39	.41	.41
1916–17.....	.44	.46	.49	.55	.53	.57	.56	.61	.69	.70	.67	.78	.54
1917–18.....	.61	.60	.60	.65	.77	.82	.89	.93	.89	.77	.77	.77	.71
1918–19.....	.70	.72	.69	.72	.72	.65	.58	.63	.70	.69	.70	.78	.70
1919–20.....	.73	.68	.70	.73	.82	.86	.86	.93	1.01	1.09	1.13	.91	.80
1920–21.....	.70	.62	.54	.51	.48	.44	.42	.42	.36	.39	.37	.34	.51
1921–22.....	.32	.35	.31	.33	.34								
11 year average..	.50	.50	.49	.50	.52	.54	.54	.55	.57	.57	.57	.57	.52

ST. LOUIS.²

Crop year.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	Weighted average.
1910–11.....	\$0.35	\$0.34	\$0.32	\$0.31	\$0.34	\$0.33	\$0.32	\$0.26	\$0.34	\$0.34	\$0.40	\$0.29	\$0.33
1911–12.....	.43	.45	.46	.48	.48	.51	.52	.54	.57	.56	.53	.45	.49
1912–13.....	.40	.33	.37	.32	.34	.34	.34	.33	.35	.39	.38	.40	.36
1913–14.....	.40	.42	.41	.40	.41	.39	.40	.40	.39	.40	.40	.37	.40
1914–15.....	.41	.49	.45	.48	.50	.54	.58	.58	.57	.53	.48	.54	.50
1915–16.....	.41	.37	.36	.37	.42	.47	.46	.43	.45	.43	.40	.41	.42
1916–17.....	.43	.46	.49	.56	.55	.57	.58	.62	.69	.70	.68	.77	.59
1917–18.....	.60	.59	.58	.67	.76	.84	.90	.93	.89	.78	.78	.76	.75
1918–19.....	.70	.71	.71	.71	.76	.66	.60	.65	.72	.70	.70	.77	.69
1919–20.....	.74	.79	.71	.74	.83	.89	.88	.90	.94	1.13	1.12	1.00	.89
1920–21.....	.73	.63	.55	.52	.50	.45	.44	.43	.38	.40	.38	.36	.51
1921–22.....	.32	.36	.32	.33	.35								
11 year average..	.51	.51	.50	.51	.54	.54	.55	.54	.57	.58	.57	.56	.54

¹ Compiled from Chicago Daily Trade Bulletin.² Compiled from St. Louis Daily Market Reporter.

OATS—Continued.

TABLE 55.—Oats: Monthly and yearly average price per bushel of reported sales of No. 3 white, 1910-11 to 1921-22—Continued.

OMAHA.³

Crop year.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	Weighted average.
1917-18.....	(⁴)	\$0.58	\$0.57	\$0.72	\$0.76	\$0.81	\$0.88	\$0.88	\$0.87	\$0.80	\$0.74	\$0.73	\$0.78
1918-19.....	\$0.68	.70	.66	.69	.70	.64	.68	.62	.69	.68	.66	.74	.67
1919-20.....	.71	.66	.67	.72	.80	.85	.86	.89	.99	1.08	1.10	.93	.84
1920-21.....	.68	.60	.52	.46	.46	.42	.39	.40	.34	.37	.34	.33	.48
1921-22.....	.29	.32	.28	.29	.30	.....	.....	.....	.....	.....	.....	.....	.....

KANSAS CITY.⁶

Crop year.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	Weighted average.
1910-11.....	\$0.34	\$0.33	\$0.32	\$0.32	\$0.32	\$0.32	\$0.31	\$0.30	\$0.32	\$0.32	\$0.39	\$0.43	\$0.34
1911-12.....	.41	.46	.49	.48	.48	.50	.53	.53	.57	.54	.52	.44	.50
1912-13.....	.34	.33	.32	.34	.33	.38	.39	.36	.43	.40	.40	.38	.37
1913-14.....	.40	.47	.45	.47	.47	.34	.33	.35	.36	.36	.39	.37	.40
1914-15.....	.47	.47	.45	.47	.48	.53	.56	.57	.55	.54	.46	.51	.54
1915-16.....	.38	.35	.36	.39	.42	.44	.47	.43	.44	.43	.39	.45	.40
1916-17.....	.45	.40	.48	.55	.54	.56	.58	.63	.71	.71	.67	.75	.58
1917-18.....	.59	.60	.60	.67	.76	.83	.90	.91	.91	.77	.72	.74	.72
1918-19.....	.74	.72	.70	.69	.72	.67	.61	.66	.71	.71	.70	.69	.66
1919-20.....	.73	.66	.69	.74	.81	.87	.89	.92	1.06	1.12	1.11	.91	.83
1920-21.....	.72	.63	.55	.51	.49	.46	.43	.37	.40	.37	.35	.35	.50
1921-22.....	.32	.35	.31	.32	.33	.....	.....	.....	.....	.....	.....	.....	.....
11 year average..	.51	.50	.49	.51	.53	.52	.55	.55	.59	.57	.56	.55	.53

MINNEAPOLIS.⁷

Crop year.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	Weighted average.
1910-11.....	\$0.35	\$0.36	\$0.30	\$0.31	\$0.30	\$0.31	\$0.29	\$0.29	\$0.32	\$0.33	\$0.37	\$0.42	\$0.33
1911-12.....	.41	.44	.46	.46	.46	.48	.50	.52	.54	.54	.50	.47	.47
1912-13.....	.34	.31	.31	.29	.30	.31	.31	.30	.32	.35	.38	.38	.33
1913-14.....	.40	.40	.37	.37	.37	.36	.36	.37	.36	.38	.38	.35	.38
1914-15.....	.42	.46	.44	.46	.46	.52	.56	.56	.55	.52	.46	.50	.48
1915-16.....	.37	.33	.34	.35	.40	.46	.45	.41	.42	.42	.38	.38	.38
1916-17.....	.44	.44	.47	.53	.49	.55	.56	.60	.67	.69	.66	.75	.52
1917-18.....	.55	.58	.58	.62	.76	.81	.88	.92	.88	.74	.75	.74	.71
1918-19.....	.68	.69	.65	.69	.69	.64	.56	.60	.68	.66	.66	.74	.66
1919-20.....	.70	.65	.67	.69	.80	.83	.82	.89	1.08	1.05	1.15	.94	.80
1920-21.....	.66	.58	.51	.47	.44	.41	.39	.39	.33	.36	.34	.34	.48
1921-22.....	.31	.33	.28	.29	.30	.....	.....	.....	.....	.....	.....	.....	.....
11 year average..	.48	.51	.48	.48	.50	.50	.52	.53	.58	.55	.54	.54	.50

³ Compiled from Omaha Daily Price Current.⁶ Compiled from Kansas City Daily Price Current.⁴ No report.⁷ Compiled from Minneapolis Daily Market Record.⁵ Prices for part of month.

TABLE 56.—Oats: Ratio of price of No. 3 yellow corn to No. 3 white oats, Chicago, 1910-11 to 1920-21.

Crop year.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1910-11.....	.....	.....	.....	1.5	1.4	1.4	1.5	1.5	1.6	1.6	1.4	1.4
1911-12.....	1.6	1.5	1.6	1.4	1.3	1.2	1.2	1.3	1.4	1.4	1.4	1.4
1912-13.....	2.3	2.2	2.0	1.6	1.4	1.4	1.5	1.5	1.6	1.5	1.5	1.6
1913-14.....	1.8	1.7	1.8	1.8	1.7	1.6	1.6	1.6	1.7	1.8	1.8	1.9
1914-15.....	2.0	1.6	1.6	1.4	1.3	1.3	1.3	1.3	1.3	1.4	1.5	1.5
1915-16.....	2.0	2.2	1.8	1.8	1.6	1.5	1.6	1.7	1.7	1.7	1.9	2.0
1916-17.....	1.9	1.9	2.0	1.8	1.7	1.7	1.8	1.8	2.0	2.3	2.5	2.6
1917-18.....	3.4	3.5	3.4	3.4	2.3	2.2	2.0	1.8	1.9	2.1	2.1	2.2
1918-19.....	2.5	2.2	2.0	1.8	2.0	2.2	2.3	2.4	2.3	2.5	2.5	2.5
1919-20.....	2.6	2.2	2.0	2.0	1.8	1.8	1.7	1.7	1.7	1.9	1.7	1.7
1920-21.....	2.3	2.1	1.7	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.7	1.8
1921-22.....	1.8	1.5	1.5	1.4	1.3	.....	.....	.....	.....	.....	.....	.....
Average.....	2.2	2.1	1.9	1.8	1.6	1.6	1.6	1.6	1.7	1.8	1.8	1.9

OATS—Continued.

TABLE 57.—Oats: Monthly and yearly receipts and shipments, 1910-11 to 1921-22.¹

[In thousands of bushels; i. e., 000 omitted.]

Crop year.	Chicago.		Milwaukee.		Minneapolis.		Duluth.		St. Louis.		Toledo.		Detroit.		Kansas City.		Peoria.		Omaha.		Indianapolis.		Total.	
	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.
1910-11.....	107,902	89,705	14,844	14,873	18,419	13,845	2,434	2,824	20,517	15,323	3,709	3,435	3,073	265	6,280	4,086	10,130	10,895	(2)	(2)	(2)	(2)	187,308	155,231
1911-12.....	87,623	70,090	10,863	8,194	10,555	10,043	4,529	4,639	16,879	11,280	2,872	2,611	2,752	348	6,018	5,071	6,658	8,737	8,368	9,258	976	364	158,569	130,065
1912-13.....	177,103	116,275	16,252	20,180	19,031	16,397	9,350	8,351	23,785	15,592	3,637	4,365	3,535	514	7,704	7,523	11,447	13,188	14,958	14,802	8,136	2,876	264,495	221,063
1913-14.....	105,738	98,141	18,434	17,172	22,995	24,272	5,795	6,761	25,967	19,497	3,655	2,819	3,807	640	11,325	11,032	12,152	13,804	15,977	18,575	5,392	1,808	231,237	214,530
1914-15.....	143,813	130,038	29,962	31,179	23,042	23,147	9,005	8,325	21,419	16,240	6,066	5,089	4,028	1,123	7,338	6,107	11,189	11,726	13,648	13,916	5,828	4,349	275,338	252,139
1915-16.....	151,168	122,280	35,252	34,389	45,778	45,024	4,844	4,528	17,518	11,636	4,707	3,301	5,173	2,392	4,882	2,782	11,364	11,838	11,421	10,681	13,767	8,677	366,401	357,708
1916-17.....	145,075	108,152	32,707	28,649	31,322	23,075	3,184	3,403	24,616	18,940	4,926	2,642	3,911	934	10,059	10,130	13,563	11,049	13,216	17,392	14,865	10,801	302,473	256,347
1917-18.....	134,310	86,725	31,766	20,128	42,017	42,181	766	680	37,431	32,129	5,303	3,194	5,677	607	18,344	12,826	20,170	17,541	23,673	21,945	19,822	13,705	337,279	251,961
1918-19.....	115,714	83,719	34,727	30,548	37,031	33,019	2,663	2,378	30,812	23,836	9,010	8,820	8,179	1,756	16,688	11,343	8,535	8,212	20,661	20,559	14,820	4,516	298,840	228,706
1919-20.....	82,141	60,702	26,572	17,766	17,054	19,033	1,035	1,084	31,301	27,772	3,221	1,601	2,418	551	7,015	5,180	10,636	13,046	13,018	12,110	13,969	4,023	209,070	153,008
1920-21.....	79,430	54,398	19,065	13,297	26,003	14,600	6,241	455	30,103	21,357	5,848	2,339	3,245	750	7,137	5,132	1,176	7,909	10,223	8,423	16,509	6,069	213,080	134,986
11-year average...	111,820	92,836	24,586	21,489	26,639	24,058	4,531	3,656	25,494	19,057	4,814	3,674	3,991	890	15,763	7,363	11,365	11,686	13,697	13,449	10,377	5,213	256,824	103,640

Month.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.
1920.														
August.....	9,687	4,702	3,317	1,005	2,285	1,221	22	1,356	15	3,188	1,806	696	46	294
September.....	9,687	3,886	3,981	1,031	4,398	1,809	1,356	703	11	2,786	1,801	1,422	232	825
October.....	6,551	3,235	1,260	2,098	4,401	1,794	703	703	16	2,700	1,130	428	223	244
November.....	4,473	3,588	1,421	1,387	1,970	1,085	209	209	35	1,918	1,063	366	188	178
December.....	4,559	3,903	1,042	1,235	1,949	1,399	262	262	9	1,868	1,134	280	173	264
1921.														
January.....	5,239	4,200	1,040	879	3,099	1,450	596	596	5	3,281	1,921	314	230	234
February.....	3,500	3,208	518	461	1,494	1,031	850	850	4	1,868	1,716	187	223	161
March.....	6,089	5,688	1,080	768	1,449	1,072	877	877	4	4,539	3,912	244	182	191
April.....	4,228	5,335	383	949	536	1,019	254	254	14	1,457	1,316	412	181	226
May.....	5,254	5,775	1,009	601	686	1,538	318	318	85	2,596	1,616	398	248	203
June.....	9,908	6,188	1,796	832	1,895	755	602	602	170	2,360	1,801	618	286	248
July.....	10,245	4,830	2,218	701	1,831	424	202	202	87	2,052	1,181	543	127	227
August.....	16,692	5,848	3,898	2,271	6,739	1,733	1,125	1,125	419	2,515	1,992	1,871	531	366
September.....	6,605	5,607	1,768	1,952	4,281	1,809	834	834	1,838	2,423	1,661	351	228	196
October.....	5,730	3,859	2,651	1,892	4,695	1,908	517	517	283	2,494	1,909	194	212	193
November.....	3,452	3,298	1,365	1,311	1,850	1,018	205	205	463	1,038	901	130	124	190
December.....	4,324	4,339	1,255	808	2,232	1,891	305	305	151	1,538	961	141	120	190

1 Compiled from Chicago Daily Trade Bulletin and Board of Trade Reports.

* No report.

OATS—Continued.

TABLE 58.—*Oats: Visible supply in United States, first of each month, 1910-11 to 1921-22.*¹

[In thousands of bushels; i. e., 000 omitted.]

Crop year.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1910-11.....	2,761	12,551	18,802	17,022	15,505	16,129	15,997	15,769	13,129	10,559	8,125	9,570
1911-12.....	11,203	20,742	21,044	22,600	20,315	18,754	15,431	14,366	13,429	11,991	8,052	3,690
1912-13.....	1,031	4,160	9,260	10,552	10,774	8,457	9,646	12,343	13,115	8,704	8,105	14,756
1913-14.....	17,131	24,662	30,718	31,684	29,664	26,909	24,450	21,489	19,755	13,262	8,144	7,210
1914-15.....	6,482	20,124	27,285	31,866	32,471	32,956	33,173	33,258	27,284	23,022	12,623	4,345
1915-16.....	1,309	2,924	14,381	15,730	20,928	21,081	20,175	20,265	17,892	12,096	16,192	12,452
1916-17.....	8,537	27,691	38,866	45,580	47,467	48,823	42,675	36,740	34,191	28,933	17,454	9,741
1917-18.....	6,679	7,277	14,165	17,453	18,595	17,657	13,879	13,947	18,098	21,911	20,822	13,227
1918-19.....	7,876	19,309	24,689	22,050	29,143	34,828	30,505	27,666	22,882	21,507	15,827	18,094
1919-20.....	20,481	19,411	19,552	19,196	16,922	13,080	11,550	10,401	9,576	6,813	8,642	3,623
1920-21.....	3,786	8,149	27,602	34,414	33,961	32,194	33,632	34,142	33,903	30,740	28,426	34,401
1921-22.....	37,562	60,455	65,843	69,917	69,198	.....	.....	.....	.....	.....	.....	.....

¹ Compiled from Chicago Daily Trade Bulletin.TABLE 59.—*Oats: Summary in per cent of carloads graded by licensed inspectors for yearly periods, all inspection points. Total of all classes and subclasses under each grade.*

1919-20 TO 1920-21.

Crop year.	Receipts.					Shipments.				
	No. 1.	No. 2.	No. 3.	No. 4.	S. G.	No. 1.	No. 2.	No. 3.	No. 4.	S. G.
1919-20.....	<i>P. ct.</i> 3.3	<i>P. ct.</i> 30.0	<i>P. ct.</i> 54.4	<i>P. ct.</i> 10.2	<i>P. ct.</i> 2.1	<i>P. ct.</i> 2.7	<i>P. ct.</i> 35.1	<i>P. ct.</i> 57.3	<i>P. ct.</i> 4.3	<i>P. ct.</i> 0.6
1920-21.....	5.4	36.8	44.7	9.0	4.1	4.2	52.7	37.2	3.3	2.6

AUGUST, 1920, TO JULY, 1921, BY CLASSES.

White.....	5.1	36.4	45.8	8.9	3.8	4.2	52.8	37.4	3.2	2.4
Red.....	4.5	43.5	33.4	12.3	6.3	2.9	53.2	38.4	4.5	1.0
Gray.....	30.4	31.7	18.7	12.4	6.8	11.1	73.2	8.0	3.9	3.8
Black.....	.0	57.9	31.5	5.3	5.3	.0	77.8	22.2	.0	.0
Mixed.....	19.2	41.0	17.1	6.4	16.3	12.3	46.1	11.6	7.1	22.9

OATS—Continued.

TABLE 60.—Oats, including oatmeal: International trade, calendar years, 1911-1920

Country.	Average, 1911-1913.		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORTING COUNTRIES.	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>
Algeria.....	93	1,296	(¹)		73	5,438	3,670	1,891
Argentina.....	54	52,754	6	37,347	19	22,958		
Bulgaria.....	53	278						699
Canada.....	117	16,583	3,767	24,024	3,295	16,346	1,347	16,909
China.....	48	484	(¹)	70	1	238	42	435
Chile.....		2,499	30	496	20	1,835	31	196
Rumania.....	76	10,012			330			2,436
Russia.....	1,643	65,279						
United States.....	5,557	12,592	45	131,085	19	67,570	6,728	16,540
PRINCIPAL IMPORTING COUNTRIES.								
Austria-Hungary.....	3,426	237						109
Belgium.....	8,845	59			3,948	33	4,508	9
Denmark.....	4,126	151	(¹)	1	569	37	91	25
Cuba.....	1,361		1,649		1,192			
Finland.....	1,187	433	57		114	4	265	
France.....	30,746	122	35,010	31	31,632	65	18,153	4,876
Germany.....	41,320	30,844					243	265
Italy.....	9,040	104	19,255	3	12,046	184	3,147	1
Netherlands.....	41,901	33,814	1	(¹)	2,870	127	2,080	433
Norway.....	698	39	11		(¹)	736	14	183
Philippine Islands.....	486		53		106		100	
Sweden.....	6,055	2,342	365	(¹)	1,605	36	14	595
Switzerland.....	12,484	15	2,142	2	6,334	3	3,704	16
United Kingdom.....	64,755	1,411	55,595	107	29,944	3,713	24,862	
Other countries.....	1,976	3,151	524	3,437	585	4,457	1,052	1,690
Total.....	236,047	234,499	118,510	208,503	94,702	323,780	70,091	49,255

¹ Less than 500.² One year³ Two-year average.⁴ Austria only, new boundaries.

BARLEY.

TABLE 61.—Barley: Area and production of undermentioned countries, 1909–1921.

Country	Area.				Production.			
	Average 1909–1913. ¹	1919	1920	1921	Average 1909–1913. ¹	1919	1920	1921
NORTH AMERICA.	<i>1,000 acres.</i>	<i>1,000 acres.</i>	<i>1,000 acres.</i>	<i>1,000 acres.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>
United States.....	7,619	6,720	7,600	7,240	181,881	147,608	189,332	151,181
Canada:								
New Brunswick..	3	11	8	9	79	285	194	151
Quebec.....	99	235	194	192	2,382	5,344	4,910	4,073
Ontario.....	587	569	484	462	17,017	13,134	16,660	10,149
Manitoba.....	561	594	839	1,043	15,954	17,149	17,520	19,682
Saskatchewan..	234	493	519	498	7,350	8,971	10,502	13,543
Alberta.....	183	414	481	568	5,364	10,562	12,739	11,657
Other.....	14	30	27	24	386	944	786	654
Total Canada..	1,683	2,646	2,552	2,796	48,532	56,389	63,311	59,709
Mexico.....					6,666			
Total North America.....	9,302				237,079			
SOUTH AMERICA.								
Argentina.....	268		615	667	3,626		10,279	11,161
Chile.....	117	98		139	3,924	3,977	3,977	5,385
Uruguay.....	4		5	11	61		72	169
Total South America.....	389			817	7,611		14,338	16,715
EUROPE.								
Austria.....	2,712	233	238	267	71,988	3,822	4,392	5,201
Croatia-Slavonia ²	158				2,540			
Bosnia-Herzegovina ²	214				3,455			
Belgium.....	35	78	90	91	4,247	3,617	4,850	3,939
Bulgaria.....	616	474	545	551	12,425	10,371	13,926	13,241
Czechoslovakia..		899	1,711	1,583		21,568	37,238	47,364
Denmark.....	591	586	626	628	22,589	24,523	24,707	27,328
Finland.....		293	293	296	5,737	5,295	4,983	4,939
France.....	1,866	1,502	1,641	1,653	46,489	26,285	38,382	37,804
Germany.....	3,976	2,782	2,949	2,808	153,529	176,695	182,344	189,055
Greece.....	195	300	581	581	3,692	5,020	7,026	6,430
Hungary Proper ³	2,700		1,266	1,187	69,812		22,585	20,592
Italy.....	613	480	494	541	10,104	8,327	5,870	10,362
Yugoslavia.....			1,181			20,446	20,650	12,401
Luxemburg.....	3	6	5	5	82		105	96
Netherlands.....	68	57	56	62	3,270	2,688	2,743	3,651
Norway.....	89	156	156	156	2,867	5,275	5,382	4,810
Rumania.....	1,319	1,943	3,385	3,280	24,821	31,641	63,203	49,658
Russia Proper ⁴	23,075				372,856			
Poland.....	1,249	1,815	1,944	2,429	27,150	735,917	39,309	53,305
Northern-Caucasia ⁵	3,735				67,191			
Serbia ⁶	242				5,072			
Spain.....	3,509	4,254	4,319	4,261	74,689	81,808	90,462	89,320
Sweden.....	451	412	402	402	14,592	12,892	11,023	11,804
Switzerland.....		19	18	16	625	620		552
United Kingdom:								
England.....	1,400	1,406		1,356	47,352	40,592	47,856	40,552
Wales.....	88	104	99	80	2,812	3,200	2,824	1,920
Scotland.....	191	174	204	171	7,103	6,112	7,784	6,158
Ireland.....	165	187	207	175	7,493	7,800	7,527	5,932
Total United Kingdom.....	1,844	1,871	2,048	1,782	64,760	57,704	65,991	54,582
Total Europe..	49,370				1,063,957			
ASIA.								
British India.....	7,836	6,394	7,415		40,973	129,827	149,380	
Cyprus.....					2,151	2,393	3,500	

¹ Five-year average except in a few cases where statistics were unavailable.² Old boundaries.³ Bohemia, Moravia, and Silesia.⁴ Summer barley only.⁵ Unofficial.⁶ Former Kingdom, Bessarabia, and Bukovina.⁷ Former Russian Poland, Former and Western Galicia and Posen.

BARLEY—Continued.

TABLE 61.—*Barley: Area and production of undermentioned countries, 1909-1921—Continued.*

Country.	Area.				Production.			
	Average 1909-1913.	1919	1920	1921	Average 1909-1913.	1919	1920	1921
ASIA—Continued.								
Japanese Empire:	<i>1,000 acres.</i>	<i>1,000 acres.</i>	<i>1,000 acres.</i>	<i>1,000 acres.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>
Japan.....	3,183	2,893	2,987	.....	89,528	89,356	92,140	89,898
Formosa.....	5	.....	.....	.....	53	.....	.....	.....
Korea.....	843	.....	.....	.....	19,436	26,480	.....	.....
Total Japanese Empire.....	4,031	.....	.....	.....	109,017	.....	.....	.....
Russia (Asiatic).....	829	.....	.....	.....	11,171	.....	.....	.....
Total Asia.....	12,696	.....	.....	.....	163,312	.....	.....	.....
AFRICA.								
Algeria.....	3,353	2,640	2,795	2,508	41,961	33,667	29,932	50,491
Egypt.....	394	357	340	374	10,283	10,449	10,449	11,371
Morocco.....	.....	1,523	2,341	1,905	26,394	39,645	29,510	29,510
Tunis.....	1,145	1,106	927	1,230	7,900	5,511	2,618	11,482
Union of South Africa	.....	55	99	91	2,015	1,058	749	1,137
Total Africa.....	.....	5,681	6,502	6,108	.....	76,913	83,393	103,991
AUSTRALASIA.								
Australia:	.....	.....	.....	.....	.....	.....	.....	.....
Queensland.....	7	1	3	.....	119	9	35	.....
New South Wales	12	8	5	.....	204	86	39	.....
Victoria.....	60	100	86	.....	1,400	2,029	1,529	.....
South Australia.....	46	130	158	.....	842	2,417	2,449	.....
Tasmania.....	6	7	6	.....	184	141	120	.....
Western Aus- tralia.....	6	8	9	.....	70	82	116	.....
Total Australia.....	137	255	267	.....	2,819	4,764	4,288	.....
New Zealand.....	39	19	23	47	1,402	711	816	1,587
Total Austral- asia.....	176	274	290	.....	4,221	5,475	5,104	.....
Grand total.....	76,825	.....	.....	.....	1,528,056	.....	.....	.....

TABLE 62.—*Barley: World production so far as reported, 1895-1921.*

Year.	Production.	Year.	Production.	Year.	Production.	Year.	Production.
	<i>Bushels.</i>		<i>Bushels.</i>		<i>Bushels.</i>		<i>Bushels.</i>
1895.....	915,504,000	1902.....	1,229,132,000	1909.....	1,458,263,000	1916.....	1,189,868,000
1896.....	932,100,000	1903.....	1,235,786,000	1910.....	1,388,734,000	1917.....	936,050,000
1897.....	864,605,000	1904.....	1,175,784,000	1911.....	1,373,286,000	1918.....	1,074,158,000
1898.....	1,030,581,000	1905.....	1,180,053,000	1912.....	1,466,977,000	1919.....	972,937,000
1899.....	965,720,000	1906.....	1,296,579,000	1913.....	1,650,265,000	1920.....	1,145,779,000
1900.....	959,622,000	1907.....	1,271,237,000	1914.....	1,463,289,000	1921.....	968,916,000
1901.....	1,072,195,000	1908.....	1,274,897,000	1915.....	1,439,357,000		

BARLEY—Continued.

TABLE 63.—Barley: Average yield per acre in undermentioned countries, 1890–1921.

Year.	United States.	Russia (European).	Germany.	Austria.	Hungary, proper.	France.	United Kingdom.
Average:	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1890–1899.....	23.4	13.3	29.4	21.1	.....	¹ 22.6	39.8
1900–1909.....	25.5	14.3	35.3	26.3	.....	¹ 23.6	35.0
1910–1919.....	25.1	² 15.6	33.2	26.3	³ 24.2	¹ 23.1	33.6
1919.....	22.0	.....	27.6	16.4	.....	17.5	30.8
1920.....	24.9	.....	27.9	18.5	17.8	23.4	32.2
1921.....	20.9	.....	31.7	19.5	17.4	22.9	30.6

¹ Winchester bushels.² Seven year average.³ Six year average.

TABLE 64.—Barley: Acreage, production, value, exports, etc., in the United States, 1849–1921.

[See headnote of Table 4.]

Year.	Acreage harvested (000 omitted).	Average yield per acre.	Production (000 omitted).	Average farm price per bushel Dec. 1.	Farm value Dec. 1 (000 omitted).	Chicago, cash price per bushel, low malting to fancy. ¹				Domestic exports, fiscal year beginning July 1.	Imports, fiscal year beginning July 1.
						December.		Following May.			
						Low.	High.	Low.	High.		
	Acres.	Bush.	Bushels.	Cents.	Dollars.	Cts.	Cts.	Cts.	Cts.	Bushels.	Bushels.
1849.....			5,167								
1859.....			15,846								
1866-1875.....	1,196	22.6	26,992	79.2	21,382	94	109	102	120	212,563	5,493,794
1876-1885.....	2,102	22.4	47,029	61.0	28,685	75	82	73	77	1,008,254	7,686,520
1886-1895.....	3,490	22.8	79,646	47.0	37,464	56	58	54	58	2,597,671	5,782,846
1896.....	4,172	23.8	99,394	30.0	29,814	22	37	24½	35	20,030,301	1,271,787
1897.....	4,150	24.9	103,279	35.2	36,346	25½	42	36	53	11,237,077	124,804
1898.....	4,237	23.5	99,490	38.9	38,701	40	50½	36	42	2,267,403	110,475
1899.....	4,470	26.1	116,552	39.0	45,479	35	45	36	44	23,661,362	189,757
1900.....	4,545	21.1	96,041	40.5	38,896	37	61	37	57	6,293,207	171,604
1901.....	4,742	25.7	121,784	45.2	55,068	56	63	64	72	8,714,268	57,406
1902.....	5,126	29.1	149,389	45.5	67,944	36	70	18	56	8,459,141	56,462
1903.....	5,568	26.4	146,864	45.4	66,700	42	61½	38	59	10,881,627	90,708
1904.....	5,912	27.4	162,105	41.6	67,427	38	52	40	50	10,661,655	81,020
1905.....	6,250	27.2	170,174	39.4	67,005	37	53	42	55½	17,729,360	18,019
1906.....	6,730	28.6	192,270	41.6	80,069	44	56	66	85	8,238,842	28,319
1907.....	6,941	24.5	170,008	66.3	112,675	78	102	60	75	4,349,078	199,741
1908.....	7,294	25.3	184,857	55.2	102,037	57	64½	66	75	6,580,393	2,644
1909.....	7,699	24.4	187,973	54.8	102,947	55	72	50	68	4,311,566	.....
1910 ²	7,743	22.5	173,832	57.8	100,426	72	90	75	115	9,399,346	.....
1911.....	7,627	21.0	160,240	86.9	139,182	102	130	68	132	1,585,242	.....
1912.....	7,530	29.7	223,824	50.5	112,957	43	77	45	68	17,536,703	.....
1913.....	7,499	23.8	178,189	53.7	95,731	50	79	51	66	6,644,747	.....
1914.....	7,565	25.8	194,953	54.3	105,903	60	75	74½	82	26,754,522	.....
1915.....	7,148	32.0	228,851	51.6	118,172	62	77	70	83	27,473,160	.....
1916.....	7,757	23.5	182,309	88.1	160,646	95	125	128	165	16,381,077	.....
1917.....	8,983	23.7	211,759	113.7	240,758	125	163	105	176	26,285,378	.....
1918.....	9,740	26.3	256,225	91.7	234,942	88	105	110	130	20,457,781	.....
1919 ²	6,720	22.0	147,608	120.6	178,080	125	168	140	190	26,571,284	.....
1920.....	7,600	24.9	189,332	71.3	135,083	50	98	.....	.....	20,457,198	.....
1921 ²	7,240	20.9	151,181	42.2	63,788	.....	.....	.....	.....	.....	.....

¹ Prices 1895 to 1908 for No. 3 grade.² Acreage adjusted to census basis.³ Preliminary estimate.

BARLEY—Continued.

TABLE 65.—Barley: Acreage, production, and total farm value, by States, 1919-1921.

State.	Thousands of acres.			Production (thousands of bushels).			Total value, basis Dec. 1 price (thousands of dollars).		
	1919	1920	1921 ¹	1919	1920	1921 ¹	1919	1920	1921 ¹
Maine.....	4	4	4	112	104	104	190	144	89
New Hampshire.....	1	1	1	25	26	23	47	38	25
Vermont.....	9	11	8	225	308	200	338	370	160
New York.....	171	170	158	3,762	4,930	3,318	5,116	4,881	2,057
Pennsylvania.....	14	15	13	343	360	280	439	324	174
Maryland.....	4	4	4	132	110	120	162	121	80
Virginia.....	9	10	9	225	270	207	292	270	149
Ohio.....	114	102	97	2,622	2,825	2,037	3,278	2,316	1,039
Indiana.....	74	81	65	1,850	2,187	1,235	2,183	1,903	598
Illinois.....	177	182	173	4,779	5,533	4,550	5,783	4,537	2,093
Michigan.....	297	255	235	5,049	6,630	4,112	5,958	5,768	2,344
Wisconsin.....	516	502	473	13,674	15,913	10,642	16,546	13,367	5,427
Minnesota.....	814	895	886	16,280	22,375	17,720	18,855	13,872	6,025
Iowa.....	236	180	166	6,013	4,950	3,901	6,740	3,113	1,638
Missouri.....	9	7	7	270	196	154	351	192	100
North Dakota.....	1,085	1,085	1,096	12,478	19,530	16,988	13,476	10,937	4,927
South Dakota.....	771	1,028	1,019	16,962	25,700	17,323	19,506	13,364	5,024
Nebraska.....	217	256	199	5,577	7,424	4,915	5,577	3,712	1,376
Kansas.....	509	767	660	13,743	19,482	13,200	13,743	8,767	3,528
Kentucky.....	6	5	6	150	140	144	236	161	88
Tennessee.....	6	6	9	120	138	189	216	152	189
Texas.....	78	78	78	2,730	1,794	1,872	3,058	1,346	842
Oklahoma.....	77	116	122	2,310	2,784	2,684	2,818	2,004	1,208
Montana.....	75	64	60	420	1,152	1,200	558	749	720
Wyoming.....	8	6	8	120	216	232	210	238	151
Colorado.....	153	216	202	2,907	5,292	4,444	3,488	3,969	1,644
New Mexico.....	10	11	10	238	260	239	262	195	146
Arizona.....	25	20	29	875	680	928	1,225	952	742
Utah.....	16	19	16	366	593	512	516	593	246
Nevada.....	6	5	6	159	150	187	238	248	150
Idaho.....	90	92	87	2,340	3,220	2,784	3,276	2,415	1,308
Washington.....	85	82	76	2,550	2,895	2,797	3,442	2,895	1,454
Oregon.....	67	75	70	1,548	2,415	2,240	2,322	2,415	1,120
California.....	987	1,250	1,138	26,649	28,750	29,700	37,575	28,750	16,632
United States....	6,720	7,600	7,240	147,608	189,332	151,181	178,080	135,083	63,788

¹ Preliminary estimate.

TABLE 66.—Barley: Condition of crop, United States, on first of months named, 1900-1921.

Year.	June.	July.	August.	When harvested.	Year.	June.	July.	August.	When harvested.
	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>		<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
1900.....	86.2	76.3	71.6	70.7	1911.....	90.2	72.1	66.2	65.5
1901.....	91.0	91.3	86.9	83.8	1912.....	91.1	88.3	89.1	88.9
1902.....	93.6	93.7	90.2	89.7	1913.....	87.1	76.6	74.9	73.4
1903.....	91.5	86.8	83.4	82.1	1914.....	95.5	92.6	85.3	82.4
1904.....	90.5	88.5	88.1	87.4	1915.....	94.6	94.1	93.8	94.2
1905.....	93.7	91.5	89.5	87.8	1916.....	86.3	87.9	80.0	74.6
1906.....	93.5	92.5	90.3	89.4	1917.....	89.3	85.4	77.9	76.3
1907.....	84.9	84.4	84.5	78.5	1918.....	90.5	84.7	82.0	81.5
1908.....	89.7	86.2	83.1	81.2	1919.....	91.7	87.4	73.6	69.2
1909.....	90.6	90.2	85.4	80.5	1920.....	87.6	87.6	84.9	82.5
1910.....	89.6	73.7	70.0	69.8	1921.....	87.1	81.4	71.4	68.4

BARLEY—Continued

TABLE 67.—Barley: Forecast of production, monthly, with preliminary and final estimates.

[000 omitted.]

Year	June.	July.	August.	September.	October production estimate.	Final estimate
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1912.....	192,000	194,000	202,000	209,000	224,619	223,824
1913.....	177,000	165,000	165,000	168,000	173,301	178,189
1914.....	206,430	211,319	202,660	199,575	196,568	194,953
1915.....	197,289	203,173	217,441	222,936	236,682	238,851
1916.....	159,285	205,989	194,842	184,441	183,536	182,309
1917.....	214,371	213,952	203,593	203,839	201,659	211,759
1918.....	235,272	229,816	231,815	235,835	236,505	256,227
1919.....	231,757	230,900	203,525	195,297	198,298	147,608
1920.....	185,108	193,090	195,925	194,858	191,386	189,332
Average.....	203,168	205,804	202,178	201,531	204,728	201,450
1921.....	190,661	184,288	170,511	166,906	163,399	¹ 151,181

¹ Preliminary.

TABLE 68.—Barley: Yield per acre, price per bushel Dec. 1, and value per acre, by States.

State.	Yield per acre (bushels).						Farm price per bushel (cents).														Value per acre (dollars). ¹	
	5-year average, 1917-1921.	1917	1918	1919	1920	1921	10-year average, 1912-1921.	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	5-year average, 1916-1920.	1921			
Maine.....	25.2	21.0	25.0	28.0	26.0	26.0	109	77	80	81	75	104	130	149	170	138	86	35.01	22.36			
New Hampshire.....	26.2	25.0	32.0	24.8	23.0	23.0	118	84	80	82	79	90	175	150	188	146	110	40.31	25.30			
Vermont.....	27.6	29.0	31.0	25.0	28.0	25.0	105	80	80	75	75	100	140	153	150	120	80	37.33	20.00			
New York.....	26.3	28.0	31.5	22.0	29.0	21.0	94	68	69	71	75	101	130	126	136	99	62	31.65	13.02			
Pennsylvania.....	25.2	28.0	28.0	24.5	24.0	21.5	90	68	71	70	75	75	140	120	128	90	62	28.90	13.38			
Maryland.....	29.3	25.0	31.0	33.0	27.0	53.0	89	68	64	66	70	73	130	120	123	110	67	32.78	20.10			
Virginia.....	26.4	30.0	27.0	25.0	27.0	23.0	99	75	70	80	75	85	139	160	130	100	72	33.56	16.56			
Ohio.....	27.2	33.0	31.5	23.0	27.0	21.0	78	55	58	59	54	80	118	93	125	82	51	28.39	10.71			
Indiana.....	27.7	30.5	37.0	25.0	27.0	19.0	78	60	50	67	65	75	104	104	118	87	48	28.69	9.12			
Illinois.....	31.4	37.5	36.0	27.0	30.4	26.3	79	53	57	61	57	103	121	90	121	82	46	33.67	12.10			
Michigan.....	23.0	24.4	30.0	17.0	26.0	17.5	82	65	60	65	62	91	119	100	118	87	57	24.80	9.93			
Wisconsin.....	29.7	32.0	35.7	26.5	31.7	22.5	81	55	60	62	56	105	124	92	121	84	51	32.54	11.48			
Minnesota.....	24.6	27.0	31.0	20.0	25.0	20.0	68	41	48	53	49	87	111	80	116	62	34	22.00	6.80			
Iowa.....	28.6	35.0	31.5	25.5	27.5	23.5	72	52	55	55	49	91	117	85	112	63	42	28.09	9.87			
Missouri.....	26.0	25.0	25.0	30.0	28.0	22.0	85	66	60	65	63	93	94	115	130	98	65	27.46	14.30			
North Dakota.....	15.8	12.5	21.5	11.5	13.0	15.5	61	35	40	45	44	30	100	73	108	56	29	12.62	4.50			
South Dakota.....	24.1	27.0	29.5	22.0	25.0	17.0	65	42	46	50	46	83	110	78	115	52	29	21.97	4.93			
Nebraska.....	24.5	26.5	16.5	23.0	20.0	24.7	62	42	49	47	42	75	98	83	100	50	28	20.24	6.02			
Kansas.....	18.1	8.0	10.0	27.0	23.4	20.0	64	40	55	47	42	77	113	95	100	45	20	13.89	5.40			
Kentucky.....	26.6	28.0	28.0	25.0	28.0	24.0	98	73	78	77	77	90	115	110	157	115	61	33.25	11.64			
Tennessee.....	20.4	15.0	23.0	20.0	23.0	21.0	109	80	70	82	75	100	144	152	180	110	100	28.31	21.00			
Texas.....	23.8	20.0	17.0	35.0	23.0	24.0	88	78	81	70	68	80	137	130	112	75	45	23.91	10.50			
Oklahoma.....	22.2	18.0	17.0	30.0	24.0	22.0	84	50	60	53	50	100	148	124	122	72	45	22.82	9.90			
Montana.....	16.1	11.5	22.0	5.6	18.0	20.0	75	53	48	53	48	76	103	100	140	65	60	15.67	12.00			
Wyoming.....	30.6	36.0	37.0	15.0	36.0	29.0	94	62	61	64	55	87	130	130	175	110	65	37.89	18.80			
Colorado.....	33.3	33.0	18.0	19.0	24.5	22.0	74	50	56	55	48	82	104	113	120	75	37	24.42	8.14			
New Mexico.....	25.5	28.0	28.0	23.0	8.3	23.9	88	71	72	75	70	100	139	110	110	75	61	28.32	14.58			
Arizona.....	34.0	35.0	34.0	35.0	34.0	32.0	102	87	73	60	56	108	150	130	140	140	80	46.22	25.00			
Utah.....	31.6	37.0	35.0	22.9	31.2	23.2	84	59	55	50	52	76	120	140	141	100	48	36.83	15.36			
Nevada.....	31.3	35.0	34.0	26.5	30.0	31.1	108	87	90	65	70	95	119	154	150	165	80	44.44	24.88			
Idaho.....	30.0	29.0	28.0	26.0	35.0	32.0	78	51	48	50	52	82	105	130	140	75	47	32.30	15.04			
Washington.....	29.3	32.0	15.5	23.0	35.0	33.6	81	53	52	52	56	84	115	115	133	100	52	32.26	19.14			
Oregon.....	28.3	29.0	25.0	23.1	32.2	32.0	86	55	55	61	62	80	115	136	150	100	50	33.00	16.00			
California.....	26.0	29.0	26.0	27.0	23.0	25.0	89	70	68	59	62	95	120	115	141	100	56	30.47	14.00			
United States	23.6	23.7	26.3	22.0	24.9	20.9	73.8	50.5	53.7	54.3	51.6	88.1	113.7	91.7	120.6	71.3	42.2	23.21	8.81			

¹ Based upon farm price Dec. 1.

Statistics of Barley.

557

BARLEY—Continued.

TABLE 69.—*Barley: Farm price, cents per bushel on first of each month, 1908-1921.*

Year	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Average.
1908.....	70.4	68.0	66.8	66.5	65.4	61.3	58.1	57.1	56.1	55.2	53.7	55.4	59.2
1909.....	56.5	58.3	59.4	61.2	63.8	67.0	67.0	61.2	54.6	53.4	53.2	54.0	56.5
1910.....	57.6	59.3	60.2	59.7	56.5	55.7	53.9	54.7	57.2	56.1	55.3	57.8	56.9
1911.....	59.9	64.1	63.0	69.1	74.0	73.8	70.1	69.3	77.0	81.7	84.9	86.9	75.2
1912.....	86.4	91.2	91.0	92.3	96.2	91.1	81.9	66.8	53.5	54.8	53.8	50.5	66.9
1913.....	49.9	51.4	49.0	48.5	48.3	52.7	53.7	50.8	55.2	56.8	54.7	53.7	53.3
1914.....	52.2	52.4	51.1	51.7	49.3	49.1	47.5	45.1	52.5	51.8	51.7	54.3	51.5
1915.....	54.3	62.9	67.7	64.7	63.8	62.0	55.8	56.7	51.9	46.8	50.1	51.6	54.1
1916.....	54.9	61.7	59.6	57.2	59.6	59.6	59.3	59.3	72.9	76.5	83.2	88.1	71.0
1917.....	87.1	92.7	96.9	102.3	120.1	119.3	106.6	114.5	110.0	113.9	111.3	113.7	107.7
1918.....	126.5	131.9	161.1	170.2	158.5	135.4	118.4	110.0	100.9	95.5	94.9	91.7	112.6
1919.....	91.3	86.8	85.4	92.7	103.9	109.2	108.4	118.7	115.6	115.3	117.1	120.6	108.8
1920.....	130.2	137.1	129.3	140.0	146.4	148.3	142.0	121.0	105.0	91.2	81.7	71.3	106.9
1921.....	64.4	57.2	56.8	54.4	49.2	51.6	50.6	49.4	47.0	45.4	41.7	42.2	48.9
Average 1912-1921.....	70.7	82.7	84.8	87.4	89.5	87.8	82.4	79.2	76.4	74.8	74.0	73.8	78.2

TABLE 70.—*Barley: Extent and causes of yearly crop losses, 1909-1920.*

Year.	Deficient moisture.	Excessive moisture.	Floods.	Frost or freeze.	Hail.	Hot winds.	Storms.	Total climatic.	Plant disease.	Insect pests.	Animal pests.	Defective seed.	Total.
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
1920.....	10.4	2.2	0.2	0.4	1.1	2.0	0.2	16.8	3.0	1.3	0.2	0.1	21.7
1919.....	18.0	3.4	.5	.2	1.8	3.8	.3	28.2	5.3	4.3	.1	.1	38.5
1918.....	20.7	.4	.1	.7	1.1	2.3	.3	25.0	.6	1.6	.2	(1)	28.8
1917.....	26.6	.8	(1)	1.0	1.1	2.8	.2	32.1	.5	.4	.1	.1	33.6
1916.....	8.0	3.4	.3	.7	1.5	5.0	.5	20.2	8.5	.7	.1	.1	30.6
1915.....	1.3	2.3	.3	.7	1.7	.3	.5	8.0	.9	.2	.2	.1	10.0
1914.....	8.8	2.9	.2	.6	1.5	4.6	.4	18.4	2.3	.6	.2	.1	22.7
1913.....	24.5	.7	.1	.4	1.0	3.2	.3	31.1	.2	1.2	.2	.2	34.3
1912.....	8.4	1.8	.1	.9	1.9	1.7	.5	15.9	.9	.5	.5	.3	19.6
1911.....	30.0	1.2	.....	.8	.4	5.3	.1	38.1	.9	.9	.3	.2	41.3
1910.....	34.0	2.8	.1	.9	.9	4.8	.1	40.7	.4	.8	.5	.1	43.1
1909.....	8.9	3.6	.3	1.0	2.1	2.5	.8	19.0	1.4	.4	.5	.2	22.8
Average.....	16.6	1.9	.2	.7	1.3	3.1	.4	24.5	2.1	1.1	.3	.1	28.9

¹ Less than 0.05 per cent.

BARLEY—Continued.

TABLE 71.—*Barley: Monthly and yearly average price per bushel of No. 2, Minneapolis, 1910-11 to 1921-22.*¹

Crop year.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	Average.
1910-11.....	\$0.61	\$0.63	\$0.63	\$0.66	\$0.70	\$0.77	\$0.74	\$0.81	\$0.88	\$0.75	\$0.77	\$0.87	\$0.74
1911-12.....	.85	.94	.95	.98	.91	1.05	1.00	.95	1.01	.99	.76	.60	.92
1912-13.....	.46	.49	.50	.47	.45	.49	.48	.46	.46	.50	.52	.48	.48
1913-14.....	.58	.61	.56	.53	.50	.52	.50	.48	.47	.48	.47	.45	.51
1914-15.....	.59	.58	.55	.59	.57	.68	.75	.70	.70	.70	.66	.68	.65
1915-16.....	.59	.48	.51	.56	.61	.70	.66	.65	.68	.70	.68	.69	.63
1916-17.....	.81	.81	1.03	1.11	1.07	1.17	1.17	1.21	1.36	1.48	1.38	1.49	1.17
1917-18.....	1.31	1.33	1.28	1.27	1.49	1.56	1.88	2.12	1.82	1.46	1.23	1.18	1.49
1918-19.....	1.02	.95	.91	.94	.92	.90	.87	.93	1.09	1.13	1.12	1.21	1.00
1919-20.....	1.33	1.27	1.29	1.33	1.52	1.52	1.37	1.51	1.60	1.74	1.49	1.16	1.43
1920-21.....	1.02	.99	.92	.82	.74	.69	.65	.67	.61	.59	.57	.62	.74
1921-22.....	.58	.55	.50	.54	.47								
11 year average.....	.78	.82	.83	.84	.86	.91	.92	.95	.97	.96	.88	.86	.89

¹ Compiled from Minneapolis Market Record.TABLE 72.—*Barley and malt: International trade, calendar years, 1911-1920.*

Country.	Average 1911-1913.		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORT- ING COUNTRIES.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.
Algeria.....	298	4,720	1		32	15,696	4,055	1,715
Argentina.....	1,310	917	885	218	1,123	1,871		
Austria-Hungary.....	839	18,271					1,647	
British India.....		17,129		14,848		598		251
Bulgaria.....	26	1,700						
Canada.....	166	6,670	8	4,556	75	13,172	204	9,954
Chile.....	155	631	(²)	1,450	(²)	2,792	3	2,024
China.....	61	660	23	97	42	684	57	288
Rumania.....	109	16,692			20			19,253
Russia.....	974	168,461						
United States.....		8,400		19,620		46,745		21,718
PRINCIPAL IMPORT- ING COUNTRIES.								
Belgium.....	20,236	3,853			2,581	320	2,527	139
Brazil.....	978		309	1	622	(²)	775	
British South Africa.....	351	2	34	20	73	87	346	3
Cuba.....	278		273		443			
Denmark.....	2,098	3,561	12	437	2,699	177	46	926
Egypt.....	889	38	1	(²)	107		710	(²)
France.....	7,155	639	11,023	96	15,247	354	3,362	4,240
Finland.....	526	1	61		627		71	
Germany.....	153,544	1,225					4,904	57
Italy.....	815	27	7,604	80	1,306	112	1,608	23
Netherlands.....	41,184	29,611	136	(²)	7,125	44	3,072	1,219
Norway.....	4,333	(²)	557		782		1,221	
Switzerland.....	4,440	1	616	2	1,370	(²)	1,386	1
United Kingdom.....	51,727	932	11,725	65	38,906	220	29,796	364
Other countries.....	1,604	15,500	859	3,421	1,529	8,754	1,064	3,875
Total.....	294,096	299,641	34,127	48,654	74,709	91,626	55,864	66,050

¹ Austria only, new boundaries.² Less than 500.

RYE.

TABLE 73.—Rye: Area and production in undermentioned countries, 1909–1921.

Country.	Area.				Production.			
	Average 1909–1913. ¹	1919	1920	1921	Average 1909–1913. ¹	1919	1920	1921
NORTH AMERICA.	1,000 acres.	1,000 acres.	1,000 acres.	1,000 acres.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.
United States.....	2,236	6,307	4,409	4,228	34,916	75,483	60,490	57,918
Canada:								
Quebec.....	14	33	28	25	234	578	534	430
Ontario.....	77	140	133	123	1,405	2,219	2,350	1,776
Manitoba.....	5	209	149	258	96	4,089	2,319	3,595
Saskatchewan.....	3	190	172	1,208	55	2,000	2,535	13,546
Alberta.....	12	84	161	222	297	1,173	3,420	1,999
Other.....	1	7	7	6	9	148	148	139
Total Canada..	112	753	650	1,842	2,096	10,207	11,306	21,455
Mexico.....					70			
Total North America.....	2,348				37,082			
SOUTH AMERICA.								
Argentina.....	68				949			
Chile.....	(²) 6	(²) 8		(²) 3	144	192	192	55
Uruguay.....			(²)	(²)	1	1	(²)	4
Total South America....	74				1,094			
EUROPE.								
Austria.....	³ 5,019	717	711	758	³ 112,752	9,035	10,046	12,661
Croatia-Slavonia ⁴	185				2,231			
Bosnia-Herzegovina ⁴	39				444			
Belgium.....	644	523	523	523	22,675	14,505	18,168	17,761
Bulgaria.....	³ 530	446	452	489	³ 8,553	6,490	9,798	8,390
Czechoslovakia.....		⁴ 1,824	2,199	2,183		32,734	32,941	54,382
Denmark.....	632	583	560	559	13,098	14,909	13,242	12,204
Finland.....	³ 592	602	603	605	11,174	10,505	9,173	10,385
France.....	³ 2,960	2,010	2,148	2,190	³ 45,647	30,577	34,098	44,494
Germany.....	³ 15,387	10,880	10,688	10,617	³ 445,222	240,122	195,729	260,144
Greece.....	³ 13	58	131	222	³ 218	1,081	1,360	7,315
Hungary.....	³ 2,601		1,475	1,370	³ 48,716		20,564	22,095
Italy.....	303	273	282	287	5,328	4,571	4,539	5,634
Yugoslavia.....		682	946			9,816	18,121	
Luxemburg.....	26	20	20	20	651	367	340	488
Netherlands.....	557	497	492	492	16,422	14,289	14,245	16,646
Norway.....	³ 37	³ 37	36	36	974	983	970	1,115
Rumania.....		³ 748	771	777	³ 4,652	³ 10,046	11,168	8,858
Russia proper ⁵	64,375				791,333			
Poland.....	³ 5,261	³ 6,544	7,236	8,837	³ 90,494	³ 103,045	74,842	167,215
Portugal.....						1,809	2,959	
Northern Caucasia ⁶	547				7,409			
Serbia ⁷	114				1,533			
Spain.....	1,987	1,809	1,799	1,738	27,635	23,206	27,830	28,118
Sweden.....	977	919	914	913	23,859	23,074	23,070	28,502
Switzerland.....	60	54	52	49	1,783	1,575	1,622	1,559
United Kingdom.....	61	122	108	91	1,751			
Total Europe..	103,424				1,692,554			
ASIA.								
Russia (Asiatic) ⁸	2,451				24,663			

¹ Five-year average except in a few cases where statistics were unavailable.² Less than 500.³ Old boundaries.⁴ Bohemia, Moravia, and Silesia.⁵ 1910 census.⁶ 1914.⁷ Includes Maslin.⁸ Former Kingdom, Bessarabia and Bukowina.⁹ Former Russian Poland, Western Galicia and Posen.

RYE—Continued

TABLE 73.—*Rye: Area and production in undermentioned countries, 1909-1921—Contd*

Country.	Area				Production			
	Average 1909-1913.	1919	1920	1921	Average 1909-1913.	1919	1920	1921
AUSTRALASIA.								
Australia:								
Queensland.....	(²)	(²)			2	(²)		
New South Wales.....	4	1	1		49	12	11	
Victoria.....	2	1	1		24	7	9	
South Australia.....	1	1	1		10	6	5	
Western Australia.....	1	(²)	(²)		5	2	2	
Tasmania.....	1	1	1		18	6	5	
Total Australia.....	9	4	4		108	33	32	
New Zealand.....	5	(²)			97			
Total Australasia.....	14				205			
Grand total.....	108,311				1,735,598			

¹ Less than 500.TABLE 74.—*Rye: World production so far as reported, 1895-1921.*

Year.	Production.	Year.	Production.	Year.	Production.	Year.	Production.
	<i>Bushels.</i>		<i>Bushels.</i>		<i>Bushels.</i>		<i>Bushels.</i>
1895.....	1,468,212,000	1902.....	1,617,845,000	1909.....	1,747,123,000	1916.....	1,432,786,000
1896.....	1,499,250,000	1903.....	1,659,961,000	1910.....	1,673,473,000	1917.....	473,152,000
1897.....	1,300,645,000	1904.....	1,742,112,000	1911.....	1,753,933,000	1918.....	561,165,000
1898.....	1,461,171,000	1905.....	1,495,751,000	1912.....	1,886,517,000	1919.....	638,745,000
1899.....	1,583,179,000	1906.....	1,433,395,000	1913.....	1,880,387,000	1920.....	596,845,000
1900.....	1,557,634,000	1907.....	1,538,778,000	1914.....	1,596,882,000	1921.....	783,234,000
1901.....	1,416,022,000	1908.....	1,590,057,000	1915.....	1,583,206,000		

TABLE 75.—*Rye: Average yield per acre in undermentioned countries, 1890-1921.*

Year.	United States.	Russia (European).	Germany.	Austria.	Hungary proper.	France. ¹	Ireland. ¹
Average:	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1890-1899.....	13.9	10.4	20.9	16.1		17.6	25.2
1900-1909.....	15.7	11.5	25.6	19.0	17.6	17.1	27.5
1910-1919.....	12.7	² 11.8	25.2	18.0	³ 18.4	15.6	⁴ 29.3
1919.....	12.0		22.1	12.6		15.2	
1920.....	13.7		18.3	14.1	14.0	15.9	
1921.....	13.7		24.5	16.7	16.1	20.6	

¹ Winchester bushels.² Seven-year average.³ Six-year average.⁴ Nine-year average.

Statistics of Rye.

561

RYE—Continued.

TABLE 76.—*Rye: Acreage, production, value, exports, etc., in the United States, 1849-1921.*

(See headnote of Table 4.)

Year.	Acreage harvested (000 omitted).	Average yield per acre.	Production (000 omitted).	Average farm price per bushel Dec. 1.	Farm value Dec. 1 (000 omitted).	Chicago cash price per bushel, No. 2.				Domestic exports including rye flour, fiscal year beginning July 1.
						December.		Following May.		
						Low.	High.	Low.	High.	
	Acres.	Bush.	Bushels.	Cents.	Dollars.	Cts.	Cts.	Cts.	Cts.	Bushels.
1849.....			14,189							
1859.....			21,101							
1866-75.....	1,347	13.6	18,267	79.7	14,559	80	90	97	107	540,342
1876-85.....	1,892	13.0	24,625	63.1	15,540	64	68	68	75	2,890,991
1886-95.....	2,188	12.8	27,975	54.6	15,278	52	56	55	60	1,827,651
1896.....	2,126	13.6	28,913	38.8	11,231	37	42½	32½	35½	8,575,663
1897.....	2,077	16.1	33,133	43.2	14,454	43½	47	48	75	13,502,035
1898.....	2,071	15.9	32,888	44.5	14,640	52½	55½	50½	62	10,169,822
1899.....	2,057	14.8	30,334	49.6	15,046	49	52	53	56½	2,382,012
1900.....	2,042	15.1	30,791	49.8	15,341	45½	49½	51½	54	2,345,512
1901.....	2,033	15.3	31,103	55.4	17,220	59	65½	54½	58	2,712,077
1902.....	2,051	17.2	35,255	50.5	17,798	48	49½	48	50½	5,445,273
1903.....	2,074	15.4	31,990	54.0	17,272	50½	52½	69½	78	784,068
1904.....	2,085	15.3	31,805	68.9	21,923	73	75	70	84	23,749
1905.....	2,141	16.4	35,167	60.4	21,241	64	68	58	62	1,387,826
1906.....	2,186	16.7	36,559	58.5	21,381	61	65	69	87½	769,717
1907.....	2,167	16.4	35,455	72.5	25,709	75	82	79	86	2,444,588
1908.....	2,175	16.4	35,768	72.8	26,023	75	77½	83	90	1,295,701
1909.....	2,196	16.1	35,406	72.2	25,548	72	80	74	80	242,262
1910 ¹	2,185	16.0	34,897	71.5	24,953	80	82	90	113	40,123
1911.....	2,127	15.6	33,119	83.2	27,557	91	94	90	95½	31,384
1912.....	2,117	16.8	35,604	66.3	23,636	58	64	60	64	1,854,738
1913.....	2,657	16.2	41,381	63.4	26,220	61	65	62	67	2,272,492
1914.....	2,641	16.8	42,779	86.5	37,018	107½	112½	115	122	13,026,778
1915.....	3,129	17.3	54,050	83.4	45,083	94½	98½	96½	99½	15,250,151
1916.....	3,213	15.2	48,862	122.1	59,676	130	151	200	240	13,703,499
1917.....	4,517	14.6	62,933	106.0	107,447	176	184	180	260	17,186,417
1918.....	6,391	14.2	91,041	151.6	138,038	154	164	145½	173	36,467,450
1919 ¹	6,307	12.0	75,483	133.2	100,573	149	182	198	229	41,530,961
1920.....	4,409	13.7	60,490	126.8	76,693	144	167			47,337,466
1921 ²	4,228	13.7	57,918	70.2	40,680	84	89			

¹ Acreage adjusted to census basis.

² Preliminary estimate.

RYE—Continued.

TABLE 77.—*Rye: Acreage, production, and total farm value, by States, 1920-1921.*

States.	Thousands of acres.		Production (thousands of bushels).		Total value, basis Dec. 1 price (thousands of dollars).	
	1920	1921 ¹	1920	1921 ¹	1920	1921 ¹
Massachusetts.....	2	2	36	30	70	52
Connecticut.....	5	5	90	95	157	142
New York.....	71	52	1,242	806	1,962	798
New Jersey.....	55	57	962	998	1,635	1,018
Pennsylvania.....	186	188	2,976	3,008	4,166	2,858
Delaware.....	5	4	75	44	102	44
Maryland.....	17	17	262	238	409	219
Virginia.....	40	38	450	418	714	397
West Virginia.....	11	10	121	120	194	114
North Carolina.....	43	39	408	273	775	341
South Carolina.....	5	5	55	50	165	125
Georgia.....	11	12	110	108	231	189
Ohio.....	90	83	1,296	1,079	1,750	906
Indiana.....	278	306	3,892	3,978	5,060	2,904
Illinois.....	188	197	2,933	3,349	3,813	2,679
Michigan.....	670	642	9,849	8,346	12,804	5,842
Wisconsin.....	385	328	6,160	4,756	8,008	3,377
Minnesota.....	518	582	8,806	10,185	10,713	6,315
Iowa.....	32	32	544	515	636	376
Missouri.....	28	25	336	280	420	211
North Dakota.....	974	846	9,740	9,306	11,591	5,397
South Dakota.....	205	191	2,768	3,056	3,017	1,772
Nebraska.....	129	135	1,819	1,714	1,874	1,028
Kansas.....	112	91	1,456	1,138	1,456	774
Kentucky.....	18	18	216	180	324	202
Tennessee.....	19	19	171	152	325	205
Alabama.....	1	1	11	12	28	19
Texas.....	13	13	208	156	312	156
Oklahoma.....	37	34	555	408	555	269
Arkansas.....	1	1	10	9	22	12
Montana.....	59	59	472	590	510	313
Wyoming.....	22	21	396	315	455	183
Colorado.....	100	92	1,180	1,058	1,239	635
Utah.....	16	15	133	140	200	98
Idaho.....	8	8	112	160	112	112
Washington.....	20	21	190	294	304	191
Oregon.....	35	39	420	554	525	377
United States.....	4,409	4,228	60,490	57,518	76,693	40,680

¹ Preliminary estimate.TABLE 78.—*Rye: Condition of crop, United States, on first of months named, 1901-1921.*

Year.	De- cem- ber of pre- vious year.	April.	May.	June.	When har- vested.	Year.	De- cem- ber of pre- vious year.	April.	May.	June.	When har- vested.
	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>		<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
1901.....	99.1	93.1	94.6	93.9	93.0	1912.....	93.3	87.9	87.5	97.7	88.2
1902.....	89.9	85.4	83.4	88.1	90.2	1913.....	93.5	89.3	91.0	90.9	88.6
1903.....	98.1	97.9	93.3	90.6	89.5	1914.....	95.3	91.3	93.4	93.6	92.9
1904.....	92.7	82.3	81.2	86.3	88.9	1915.....	93.6	89.5	93.3	92.0	92.0
1905.....	90.5	92.1	92.5	94.0	93.2	1916.....	91.5	87.8	88.7	86.9	87.0
1906.....	95.4	90.9	92.9	89.9	91.3	1917.....	88.8	86.0	88.8	84.3	79.4
1907.....	96.2	92.0	88.0	88.1	89.7	1918.....	94.1	85.8	85.8	83.6	80.8
1908.....	91.4	89.1	90.3	91.3	91.2	1919.....	89.0	90.6	95.3	93.5	85.7
1909.....	87.6	87.2	88.1	89.6	91.4	1920.....	89.8	86.8	85.1	84.4	83.5
1910.....	94.1	92.3	91.3	90.6	87.5	1921.....	90.5	90.3	92.5	90.3	86.9
1911.....	92.6	89.3	90.0	88.6	85.0	1922.....	92.2	89.0	91.7	.....	.....

RYE—Continued.

TABLE 79.—*Rye: Forecasts of production, monthly, with preliminary and final estimates.*

[000 omitted.]

Year.	May.	June.	July.	August production estimate.	Final estimate.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1916.....	44,255	43,537	44,001	41,884	48,862
1917.....	60,735	57,866	56,098	56,044	62,933
1918.....	82,629	81,046	81,604	76,687	91,041
1919.....	108,725	107,381	102,659	84,552	75,483
1920.....	79,789	80,006	81,997	77,893	60,490
Average.....	75,226	73,967	73,278	67,412	67,762
1921.....	72,007	71,011	69,956	64,332	¹ 57,918

¹ Preliminary.TABLE 80.—*Rye: Yield per acre, price per bushel Dec. 1, and value per acre, by States.*

State.	Yield per acre (bushels).					Farm price per bushel (cents).										Value per acre (dollars). ¹			
	5-year average, 1917-1921.	1917	1918	1919	1920	1921	10-year average, 1912-1921.	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	5-year average, 1916-1920.	1921
Mass.....	19.0	19.0	20.0	23.0	18.0	15.0	150	100	98	101	102	127	200	227	175	195	175	36.45	26.25
Conn.....	19.9	20.5	22.2	20.0	14.0	19.0	145	92	92	93	102	125	210	205	200	174	150	36.79	28.50
N. Y.....	16.9	19.0	16.5	16.0	17.5	15.5	122	76	75	89	93	128	154	172	150	158	99.27	61.15	84.30
N. J.....	17.0	18.5	18.5	16.0	17.5	17.5	123	79	80	82	92	117	175	173	160	170	102	28.39	17.85
Pa.....	16.4	17.0	17.0	16.0	16.0	16.0	115	77	74	83	84	109	170	165	157	140	95.24	60.15	20.20
Del.....	13.9	16.0	14.5	13.0	15.0	11.0	122	81	79	92	99	123	178	171	160	136	100.22	59.11	00.00
Md.....	14.9	16.0	15.0	14.0	15.0	14.0	119	80	76	86	88	110	168	170	163	156	92.23	25.12	83.88
Va.....	12.3	15.0	12.0	11.5	12.0	11.0	123	85	81	90	93	107	175	175	170	155	95.19	76.10	45.45
W. Va.....	12.6	13.5	13.7	13.0	11.0	12.0	124	84	87	90	93	119	169	180	165	160	95.21	11.11	40.40
N. C.....	8.9	10.0	9.0	8.9	9.5	7.0	147	105	98	105	105	130	200	198	210	190	125.17	43.8	75.75
S. C.....	10.4	10.0	11.2	10.0	11.0	10.0	221	145	150	150	151	185	285	295	295	300	250.28	43.25	00.00
Ga.....	9.0	8.3	8.3	8.9	10.0	9.0	186	140	135	150	140	160	270	210	272	210	175.20	26.15	75.75
Ohio.....	15.7	18.0	17.0	16.0	14.0	13.0	110	75	69	81	83	120	161	150	145	135	84.22	90.10	92.92
Ind.....	14.5	15.0	16.5	14.0	14.0	13.0	107	68	62	85	82	119	160	152	140	130	73.20	71.9	49.49
Ill.....	17.1	17.5	19.0	16.5	15.6	17.0	108	70	65	85	83	122	165	150	130	130	80.23	60.13	60.60
Mich.....	13.9	14.0	14.3	13.3	14.7	13.0	108	65	62	91	85	130	165	150	128	130	70.19	85.9	10.10
Wis.....	16.5	18.5	17.6	15.8	16.0	14.5	108	61	57	91	87	132	169	150	133	130	71.24	17.10	30.30
Minn.....	17.6	18.5	20.0	15.0	17.0	17.5	103	50	48	89	81	127	167	150	130	122	62.24	04.10	85.85
Iowa.....	17.2	18.0	19.0	15.9	17.0	16.1	102	62	60	77	80	115	155	147	132	117	73.23	25.11	75.75
Mo.....	12.8	14.7	14.0	12.0	12.0	11.2	114	80	75	87	86	123	165	163	150	125	86.18	72.9	63.63
N. Dak.....	9.8	9.5	10.5	8.0	10.0	11.0	99	47	45	84	79	125	164	145	121	119	58.13	80.6	38.38
S. Dak.....	15.3	16.0	18.0	13.0	13.5	16.0	96	52	50	78	76	118	155	141	125	109	58.20	45.9	28.28
Nebr.....	14.3	15.6	12.9	16.3	14.1	12.7	95	56	60	74	73	116	155	135	115	103	60.14	68.7	62.62
Kans.....	13.0	14.0	14.3	11.0	13.0	12.5	106	68	75	80	76	110	167	170	141	100	68.18	43.8	50.50
Ky.....	12.0	12.5	13.6	12.0	12.0	10.0	127	88	87	95	94	129	175	161	175	150	112.19	45.11	20.20
Tenn.....	9.0	9.8	10.0	8.0	9.0	8.0	144	98	99	98	103	135	195	192	200	190	135.16	98.10	80.80
Ala.....	10.6	9.5	11.0	9.5	10.9	12.0	189	134	140	110	135	175	268	261	260	250	160.25	77.19	20.20
Tex.....	12.1	10.0	9.5	4.17	0.16	0.12	138	110	101	99	103	120	196	235	167	150	100.19	34.12	00.00
Okla.....	12.4	10.0	11.0	14.0	15.0	12.0	114	87	86	95	77	125	170	187	150	100	66.17	21.7	92.92
Ark.....	10.5	13.5	10.5	9.5	10.0	9.0	143	105	95	105	100	115	150	210	200	220	130.18	96.11	70.70
Mont.....	9.1	12.7	12.0	3.0	8.0	10.0	100	60	55	70	65	96	165	144	185	108	53.14	42.5	30.30
Wyo.....	14.8	14.0	18.0	9.0	18.0	15.0	107	65	64	81	90	108	155	152	180	115	58.20	54.8	70.70
Colo.....	11.0	16.0	7.0	8.8	11.1	8.1	94	55	60	65	70	105	146	140	130	105	60.14	34.6	90.90
Utah.....	9.1	8.0	13.0	7.0	8.3	9.3	111	68	60	60	65	100	160	180	200	150	70.14	93.6	51.51
Idaho.....	15.7	15.5	15.0	14.0	14.0	20.0	99	60	58	67	68	95	135	165	175	100	70.20	06.14	00.00
Wash.....	11.6	12.7	10.0	12.0	9.5	14.0	118	65	60	85	75	111	175	200	185	160	65.19	14.9	10.10
Oreg.....	11.7	12.7	11.0	8.4	12.0	14.2	121	70	75	100	90	115	170	205	190	125	68.18	93.9	66.66
U. S.....	13.6	14.6	14.2	12.0	13.7	13.7	107.0	66.3	63.4	86.5	83.4	122.1	166.0	151.6	133.2	126.8	70.2	19.54	9.62

¹ Based upon farm price Dec. 1.

RYE—Continued.

TABLE 81.—Rye: Farm price, cents per bushel on first of each month, 1908-1921.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average.
1908	73.3	74.0	74.5	75.3	74.7	76.3	75.4	74.2	72.8	74.1	73.7	73.6	73.9
1909	73.4	73.8	75.0	77.5	78.8	81.2	81.7	78.5	72.4	72.8	73.6	71.6	74.2
1910	74.8	76.1	76.5	76.6	74.9	74.8	74.6	74.4	74.1	72.8	71.6	71.5	73.7
1911	73.3	73.1	71.9	75.4	75.8	77.9	76.9	75.5	76.9	79.7	83.1	83.2	78.1
1912	82.7	84.4	84.0	85.1	84.6	86.1	83.6	77.9	70.8	70.1	68.8	66.3	74.9
1913	63.8	68.9	63.2	62.9	62.4	64.1	68.2	60.7	63.0	64.8	63.2	63.4	63.8
1914	62.5	61.7	61.9	63.0	62.9	64.4	63.1	61.0	75.4	79.0	80.1	86.5	72.8
1915	90.2	100.6	105.4	100.4	101.9	98.1	93.7	89.0	85.5	81.7	85.7	83.4	89.2
1916	85.3	88.3	85.6	83.6	83.7	83.8	83.3	83.4	99.7	104.1	115.3	122.1	99.7
1917	118.5	123.5	126.0	135.6	164.1	183.0	177.1	178.1	161.9	169.8	168.8	166.0	156.5
1918	170.3	174.8	201.0	235.1	221.1	187.6	169.9	163.9	159.3	154.0	152.6	151.6	167.4
1919	150.7	140.4	132.2	145.8	155.5	143.7	138.6	149.7	135.3	135.8	129.8	133.2	138.5
1920	152.3	154.5	145.0	156.1	183.1	183.9	189.0	168.6	168.9	162.3	142.1	126.8	155.1
1921	124.7	131.5	126.1	118.7	105.3	112.2	103.8	98.1	89.9	88.6	74.6	70.2	96.5
Average 1912-1921	110.1	112.9	113.0	118.6	122.5	120.7	116.5	113.0	111.3	111.0	108.1	107.0	111.4

TABLE 82.—Rye: Monthly and yearly average price per bushel of No. 2, Chicago, 1910-11 to 1921-22.¹

Crop year	July	August	September	October	November	December	January	February	March	April	May	June	Average.
1910-11	\$0.77	\$0.75	\$0.74	\$0.76	\$0.79	\$0.81	\$0.84	\$0.82	\$0.89	\$0.95	\$1.02	\$0.90	\$0.84
1911-12	.84	.85	.91	.97	.95	.93	.94	.92	.91	.94	.93	.93	.91
1912-13	.74	.72	.69	.69	.64	.61	.64	.62	.60	.62	.62	.62	.65
1913-14	.63	.66	.67	.65	.64	.63	.61	.62	.61	.62	.65	.63	.64
1914-15	.64	.84	.95	.92	1.02	1.10	1.19	1.23	1.17	1.17	1.19	1.17	1.05
1915-16	1.08	1.00	.96	1.01	.99	.97	1.01	.97	.93	.96	.98	.98	.99
1916-17	.98	1.13	1.20	1.33	1.47	1.41	1.43	1.46	1.61	1.87	2.20	2.40	1.54
1917-18	2.27	1.90	1.86	1.84	1.78	1.82	2.01	2.39	2.84	2.64	2.20	1.80	2.11
1918-19	1.73	1.67	1.63	1.63	1.68	1.59	1.61	1.38	1.61	1.73	1.59	1.46	1.61
1919-20	1.55	1.54	1.40	1.38	1.42	1.66	1.76	1.56	1.72	1.99	2.13	2.27	1.70
1920-21	2.04	1.90	1.99	1.69	1.59	1.61	1.63	1.47	1.46	1.35	1.47	1.32	1.62
1921-22	1.27	1.07	1.04	.89	.79	.86							
11-year average..	1.21	1.18	1.18	1.17	1.18	1.19	1.24	1.22	1.30	1.35	1.36	1.31	1.24

¹ From Howard Bartel's "Red Book."

RYE—Continued.

TABLE 33.—*Rye (including flour): International trade, calendar years 1911–1920.*

Country.	Average 1911–1913		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORT- ING COUNTRIES.	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>
Argentina.....	(¹)	443		2		160		
Bulgaria.....	1	2,336						17
Canada.....	86	69	295	798	10	1,897	21	3,143
Germany.....	16,900	44,951					17,396	850
Roumania.....	49	3,411			101			1,560
Russia.....	5,231	34,921						
United States.....		855		16,308		40,494		59,253
PRINCIPAL IMPORT- ING COUNTRIES.								
Austria-Hungary.....	1,224	19						
Belgium.....	6,157	914			1,724	1	3,768	64
Denmark.....	8,587	303	(¹)	641	396	748	90	965
Finland.....	15,472	47	345	(¹)	4,672	(¹)	2,618	
France.....	4,138	2	1,346	1	665	15	16,351	14
Italy.....	721	2	3,506	(¹)	379	9	2,391	
Netherlands.....	31,023	18,870	751	(¹)	1,906	483	602	(¹) 2,689
Norway.....	10,520	42	3,095		6,190	4	8,374	10
Sweden.....	3,769	40	138	140	1	96	5	681
Switzerland.....	729	1	452	(¹)	1,632	(¹)	153	2
United Kingdom.....	2,195	4	5,300	8	1,620	3	2,067	192
Other countries.....	541	352	5	89	49	45	540	608
Total.....	107,343	107,587	15,233	17,987	19,345	43,955	54,276	69,448

¹ Less than 500 bushels.

BUCKWHEAT.

TABLE 34.—*Buckwheat: Acreage, production, value, exports, etc., in the United States, 1849–1921.*

[See headnote of Table 4.]

Year.	Acreage (thousands of acres).	Average yield per acre (bushels).	Production (thousands of bushels).	Average farm price Dec. 1 (cents per bushel).	Farm value Dec. 1 (thousands of dollars).	Domestic exports year beginning July 1 (bushels).	Year.	Acreage (thousands of acres).	Average yield per acre (bushels).	Production (thousands of bushels).	Average farm price Dec. 1 (cents per bushel).	Farm value Dec. 1 (thousands of dollars).	Domestic exports year beginning (bushels).
1849.....			8,957				1907.....	838	17.7	14,858	70.0	10,397	116,127
1859.....			17,572				1908.....	853	19.4	16,541	75.7	12,618	196,702
1865–75.....	730	18.3	13,369	72.8	9,735		1909.....	878	20.5	17,983	70.2	12,628	155,160
1876–85.....	799	14.5	11,610	64.7	7,510		1910.....	1,860	20.5	17,598	68.1	11,636	223
1886–95.....	879	14.6	12,854	54.7	7,031		1911.....	833	21.1	17,549	72.6	12,735	180
1896.....	853	18.5	15,805	39.3	6,211	1,677,102	1912.....	841	22.9	19,249	68.1	12,720	1,347
1897.....	838	20.6	17,260	42.1	7,259	1,370,403	1913.....	805	17.2	13,833	75.5	10,445	580
1898.....	811	17.2	13,961	45.0	6,278	1,533,980	1914.....	792	21.8	16,881	76.4	12,892	413,643
1899.....	807	16.1	13,001	55.9	7,263	426,822	1915.....	769	19.6	15,066	78.7	11,843	515,304
1900.....	795	14.9	11,810	55.8	6,588	123,540	1916.....	828	14.1	11,662	112.7	13,147	260,102
1901.....	852	18.4	15,693	56.4	8,857	719,615	1917.....	924	17.3	16,022	100.0	25,631	5,567
1902.....	856	17.9	15,286	59.6	9,110	117,953	1918.....	1,027	16.5	16,905	106.5	28,142	119,516
1903.....	870	17.5	15,246	60.8	9,277	31,006	1919.....	1,700	20.6	14,399	146.1	21,032	244,785
1904.....	876	18.6	16,327	62.5	10,208	316,399	1920.....	701	18.7	13,142	128.3	16,863	399,437
1905.....	840	18.8	15,797	58.6	9,261	696,513	1921.....	*671	21.0	14,079	81.2	11,438	
1906.....	865	18.2	15,734	59.7	9,386	199,429							

¹ Acreage adjusted to census basis.² Preliminary estimate.

BUCKWHEAT—Continued.

TABLE 85.—Buckwheat: Acreage, production, and total farm value, by States, 1920–21.

State.	Thousands of acres.		Production (thousands of bushels).		Total value, basis Dec. 1 price (thousands of dollars).	
	1920	1921	1920	1921	1920	1921
Maine.....	14	13	378	351	578	351
New Hampshire.....	1	1	20	21	24	18
Vermont.....	4	4	84	88	113	79
Massachusetts.....	1	1	19	18	27	22
Connecticut.....	2	2	34	35	54	49
New York.....	215	193	4,300	4,150	6,020	3,444
New Jersey.....	8	8	144	168	216	168
Pennsylvania.....	232	225	4,176	5,175	5,011	3,881
Delaware.....	7	7	126	98	151	74
Maryland.....	12	9	240	171	319	145
Virginia.....	19	17	410	357	574	293
West Virginia.....	32	31	624	682	874	559
North Carolina.....	6	5	120	85	132	72
Ohio.....	26	21	543	525	570	551
Indiana.....	6	6	120	114	144	114
Illinois.....	4	4	72	70	98	77
Michigan.....	40	39	580	624	632	487
Wisconsin.....	27	40	432	596	518	447
Minnesota.....	25	27	400	432	424	302
Iowa.....	6	5	102	75	137	60
Missouri.....	1	1	16	14	25	21
Nebraska.....	1	1	16	16	16	13
Kentucky.....	8	8	120	160	120	160
Tennessee.....	4	3	66	54	86	51
United States.....	701	671	13,142	14,079	16,863	11,438

TABLE 86.—Buckwheat: Condition of crop, United States, on first of months named, 1901–1921.

Year.	Aug.	Sept.	When harvested.	Year.	Aug.	Sept.	When harvested.	Year.	Aug.	Sept.	When harvested.
	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>		<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>		<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
1901.....	91.1	90.9	90.5	1908.....	89.4	87.8	81.6	1915.....	92.6	88.6	81.9
1902.....	91.4	86.4	80.5	1909.....	86.4	81.0	79.5	1916.....	87.8	78.5	66.9
1903.....	93.9	91.0	83.0	1910.....	87.9	82.3	81.7	1917.....	92.2	90.2	74.8
1904.....	92.8	91.5	88.7	1911.....	82.9	83.8	81.4	1918.....	88.6	83.3	75.6
1905.....	92.6	91.8	91.6	1912.....	88.4	91.6	89.2	1919.....	88.1	90.1	88.0
1906.....	93.2	91.2	84.9	1913.....	85.5	75.4	65.9	1920.....	90.5	91.1	85.6
1907.....	91.9	77.4	80.1	1914.....	88.8	87.1	83.3	1921.....	87.2	85.6	87.4

TABLE 87.—Buckwheat: Forecasts of production, monthly, with preliminary and final estimates.

[000 omitted.]

Year.	August.	September.	October.	November production estimate.	Final estimate.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1912.....	16,000	18,000	18,000	19,124	19,249
1913.....	17,000	18,000	18,000	14,455	13,833
1914.....	16,897	17,106	16,882	17,025	16,881
1915.....	17,651	17,556	16,738	16,350	15,056
1916.....	17,114	15,788	13,922	11,447	11,662
1917.....	19,876	20,226	17,895	16,813	16,022
1918.....	20,623	20,093	19,473	18,370	16,905
1919.....	18,002	19,193	20,076	20,120	14,399
1920.....	14,790	15,528	15,532	14,321	13,142
Average.....	17,550	17,610	16,946	16,447	15,239
1921.....	12,957	13,042	14,263	14,894	14,079

¹ Preliminary.

Statistics of Buckwheat.

567

BUCKWHEAT—Continued.

TABLE 88.—*Buckwheat: Yield per acre, price per bushel Dec. 1, and value per acre, by States.*

State.	Yield per acre (bushels).						Farm price per bushel (cents).											Value per acre (dollars). ¹	
	5-year average, 1917-1921.	1917	1918	1919	1920	1921	10-year average, 1912-1921.	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	5-year average, 1916-1920.	1921
Me.	23.9	21.5	20.0	24.0	27.0	27.0	108	70	56	60	70	95	150	150	175	153	100	33.67	27.00
N. H.	18.4	16.0	17.0	18.0	20.0	21.0	114	72	66	70	81	100	183	200	156	122	88	27.15	18.48
Vt.	21.2	20.0	21.0	22.0	21.0	22.0	113	72	80	82	82	105	150	160	170	138	90	29.55	19.80
Mass.	17.6	15.0	16.0	20.0	19.0	18.0	127	85	80	84	95	140	166	196	160	140	125	27.45	22.50
Conn.	17.8	17.3	19.0	18.0	17.0	17.5	140	88	95	95	96	120	200	210	200	160	139	32.10	24.32
N. Y.	19.3	18.0	15.0	22.0	20.0	21.5	113	64	81	76	80	122	160	175	145	140	83	25.92	17.84
N. J.	18.6	18.0	18.0	18.0	13.0	21.0	115	72	76	83	83	108	153	170	150	150	100	26.71	21.00
Pa.	19.7	18.0	18.0	21.0	18.0	23.0	106	64	73	76	79	111	163	160	140	120	75	25.10	17.25
Del.	18.1	20.0	20.0	18.0	13.0	14.0	105	66	69	76	75	113	143	143	160	120	75	26.35	10.50
Md.	20.6	21.0	20.0	23.0	20.0	19.0	111	71	75	81	72	110	165	165	155	133	85	30.16	16.15
Va.	20.7	21.1	21.0	19.0	21.6	21.0	110	75	80	84	80	95	150	163	155	140	82	28.76	17.22
W. Va.	20.4	20.0	19.5	21.0	19.5	22.0	115	75	78	83	80	101	170	173	170	140	82	29.84	18.04
N. C.	18.8	20.0	20.0	17.0	20.0	17.0	103	85	78	83	82	85	130	150	140	110	85	23.34	14.45
Ohio.	20.5	17.2	16.0	23.0	22.0	25.0	108	70	76	76	77	110	153	156	155	105	105	25.73	26.25
Ind.	17.1	15.0	15.0	16.5	20.0	19.0	110	73	75	78	80	112	165	160	150	120	100	23.23	19.00
Ill.	18.0	19.0	17.8	18.0	18.0	17.4	125	80	80	95	90	130	170	180	180	136	110	28.66	19.14
Mich.	12.7	9.0	10.0	13.8	14.5	16.0	103	65	70	71	72	115	147	170	137	109	78	15.52	12.48
Wis.	15.0	12.2	15.9	16.2	16.0	14.9	109	66	69	76	83	116	174	165	150	120	75	21.44	11.18
Minn.	16.4	14.0	17.0	19.0	16.0	16.0	100	65	64	70	75	112	135	170	130	106	70	21.25	11.20
Iowa.	14.6	12.0	15.0	14.0	17.0	15.0	120	75	81	77	80	125	200	180	169	134	80	23.23	12.00
Mo.	14.6	15.0	13.0	15.0	16.0	14.0	131	95	85	93	90	133	144	180	184	155	150	23.20	21.00
Nebr.	15.6	16.0	14.0	16.0	16.0	16.0	113	90	79	84	95	110	150	165	180	109	80	22.12	12.80
Ky.	16.0	18.0	14.0	13.0	15.0	20.0	107	78	75	78	76	100	150	140	150	104	129	100	20.00
Tenn.	17.0	17.0	18.0	15.5	16.5	18.0	107	78	75	78	76	100	150	140	150	130	95	22.68	17.10
U. S....	18.8	17.3	16.5	20.6	18.7	21.0	109.2	66.1	5.5	76.4	78.7	112.7	160.0	166.5	146.1	128.3	81.2	25.03	17.05

¹ Based upon farm price Dec. 1.

TABLE 89.—*Buckwheat: Farm price, cents per bushel on first of each month, 1908-1921*

Year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Yearly average.
1908.....	71.7	72.0	72.4	76.6	77.0	75.8	86.0	80.1	80.0	77.2	77.1	75.6	76.4
1909.....	74.3	72.0	75.5	76.2	78.8	83.4	86.9	82.9	76.9	75.0	71.6	75.0	75.0
1910.....	70.0	72.0	70.6	73.4	71.0	73.7	78.0	74.8	72.6	71.3	65.9	66.1	69.8
1911.....	65.8	64.4	64.1	65.3	65.8	70.1	72.4	76.0	74.0	69.6	73.0	72.6	70.3
1912.....	73.7	73.6	76.9	76.9	79.9	84.8	86.2	83.6	76.6	69.7	65.5	66.1	72.6
1913.....	66.8	69.4	67.0	68.3	71.4	70.8	72.9	72.4	70.0	74.1	75.5	75.4	72.4
1914.....	76.6	75.6	75.1	76.9	77.3	79.0	85.5	81.2	79.8	78.7	78.0	76.4	77.9
1915.....	77.9	83.7	85.5	85.3	84.6	86.9	92.1	89.2	81.4	73.7	78.5	78.7	81.0
1916.....	81.5	80.7	83.2	83.1	84.9	87.0	93.1	89.0	86.4	90.4	102.9	112.7	94.7
1917.....	117.2	114.6	124.8	128.3	150.6	183.7	209.2	189.3	164.3	154.4	154.2	160.0	153.2
1918.....	162.7	161.9	168.2	170.1	176.0	191.0	200.8	192.7	190.3	180.0	173.0	166.5	174.7
1919.....	162.9	158.1	148.4	149.6	147.3	165.6	160.8	165.9	159.8	162.0	151.0	146.1	154.7
1920.....	150.7	154.9	155.7	163.1	168.8	180.2	202.7	181.3	176.3	159.4	131.0	128.3	152.0
1921.....	125.4	118.7	116.3	109.3	115.9	116.1	115.3	119.7	114.4	106.0	83.9	81.2	102.4
Average 1912-1921.	109.5	109.1	110.1	111.1	115.7	124.5	131.9	126.4	119.9	114.8	109.4	109.2	113.6

FLAX.

TABLE 90.—*Flax: Area and production in undermentioned countries, 1909-1920.*

Country	Area (thousands of acres)				Production							
	Average ¹ 1909- 1913.	1918	1919	1920	Seed (thousands of bushels)				Fiber (thousands of pounds)			
					Average ¹ 1909- 1913.	1918	1919	1920	Average ¹ 1909- 1913.	1918	1919	1920
NORTH AMERICA.												
United States.....	2,490	1,910	1,503	1,757	19,505	13,369	7,256	10,774				
Canada:												
Quebec.....	1	7	11	16	11	83	111	184				
Ontario.....	8	16	14	21	128	196	130	225				
Manitoba.....	38	108	57	146	706	1,091	520	1,158				
Saskatchewan.....	893	841	930	1,141	10,393	4,205	4,490	5,705				
Alberta.....	76	96	81	104	830	480	222	726				
Total Canada..	1,056	1,068	1,091	1,425	12,068	6,055	5,473	7,998				
Mexico.....					150							
Total North America..	3,526	2,978	2,596	3,185	31,723	19,424	12,729	18,772				
SOUTH AMERICA.												
Argentina.....	3,683	3,229	3,419	3,522	31,989	19,588	30,775	42,038				
Uruguay.....	106	30	51	83	793	333	498	932				
Total South America.....	3,789	3,259	3,470	3,605	32,782	19,921	31,273	42,970				
EUROPE.												
Austria.....	97	13	7	8	694	35		38	53,096		4,080	4,906
Croatia-Slavonia.....	17				21				8,046			
Bosnia-Herzegovina.....					4				1,090			
Belgium.....	50		54	125	443		476	862	46,487		47,880	152,830
Bulgaria.....	21	1	1	1	7		5	13	524		180	550
Czechoslovakia.....			37	54			222	313			16,890	28,830
France.....	61	28	52	70	533	188	347	446	20,623	15,110	35,209	82,980
Hungary.....	24				196				20,548			
Ireland.....	53	143	96	127					23,701	35,175	30,734	35,950
Italy.....	22	48	47	69	320	472	433	386	6,289	5,291	5,291	5,070
Netherlands.....	33	14	24	60	374	176	267	610	17,276	7,674	11,350	31,420
Rumania.....	52	186	48	31	503	202	305	139	4,864	4,453	6,229	
Russia proper ²	3,217				19,772				1,022,484			
Poland ³	88		76	101	874		556		42,450			
Northern Caucasus.....	104				679				26,130			
Serbia.....	4								21,812			
Spain.....		4	2	3		65	42	52		6,768	970	710
Sweden.....	4	5		7	15				1,208			
Total Europe..	3,827				24,435				1,316,618			
ASIA.												
British India ⁴	3,821	3,797	1,989	3,103	19,773	20,600	9,400	16,760				
Japan.....	12	85	66	83		648	492		30,063	24,511	18,300	
Russia, Asiatic.....	285				1,456				96,402			
Total Asia.....	4,118				21,229				126,589			
AFRICA.												
Algeria.....	1		1	1	11		7	7				
Egypt.....			3	6			57	112				3,180
Grand total.....	15,261				110,180				1,443,207			

¹ Five-year average except in a few cases where statistics were unavailable.² Old boundaries.³ Bohemia and Moravia only.⁴ Includes Bessarabia but excludes Dobruja.

Former Kingdom and Bessarabia.

⁵ Former Kingdom, Bessarabia and Bukovina.⁶ Former Russian Poland and Western Galicia.⁷ Includes some native States.⁸ Unofficial.

FLAX—Continued.

TABLE 91.—*Flax (seed and fiber): World production as far as reported, 1896-1920.*

Year.	Production.		Year.	Production.	
	Seed.	Fiber		Seed.	Fiber.
	<i>Bushels.</i>	<i>Pounds.</i>		<i>Bushels.</i>	<i>Pounds.</i>
1896.....	82,684,000	1,714,205,000	1909.....	100,820,000	1,384,524,000
1897.....	57,696,000	1,498,054,000	1910.....	85,253,000	913,112,000
1898.....	72,938,000	1,780,693,000	1911.....	101,339,000	1,011,350,000
1899.....	66,348,000	1,138,763,000	1912.....	130,291,000	1,429,967,000
1900.....	62,432,000	1,315,931,000	1913.....	132,477,000	1,384,757,000
1901.....	72,314,000	1,050,260,000	1914.....	94,559,000	1,044,746,000
1902.....	83,591,000	1,564,840,000	1915.....	103,287,000	975,685,000
1903.....	110,455,000	1,492,383,000	1916.....	82,151,000	175,239,000
1904.....	107,743,000	1,517,922,000	1917.....	41,063,000	162,952,000
1905.....	100,458,000	1,494,229,000	1918.....	61,821,000	98,982,000
1906.....	88,165,000	1,871,723,000	1919.....	56,611,000	173,267,000
1907.....	102,960,000	2,042,390,000	1920.....	81,480,000	346,420,000
1908.....	100,850,000	1,907,591,000			

TABLE 92.—*Flaxseed: Acreage, production, value, exports, etc., in the United States, 1849-1921.*

[See headnote of Table 4.]

Year.	Acreage.	Average yield per acre.	Production.	Average farm price per bushel Dec. 1.	Farm value Dec. 1.	Domestic exports, fiscal year beginning July 1.	Imports, fiscal year beginning July 1.
	<i>Acres.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Cents.</i>	<i>Dollars.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1849.....			662,000			2,501	667,369
1859.....			697,000			2,715	1,300,000
1869.....			1,790,000			35	1,500,000
1879.....			7,171,000				1,464,195
1889.....	1,319,000	7.8	10,250,000			14,678	2,391,175
1899.....	2,111,000	9.5	19,979,000			2,830,991	67,379
1902.....	3,740,000	7.8	29,285,000	105.2	30,815,000	4,128,130	129,089
1903.....	3,233,000	8.4	27,301,000	81.7	22,292,000	758,379	213,270
1904.....	2,264,000	10.3	23,401,000	99.3	23,220,000	1,338	296,184
1905.....	2,535,000	11.2	28,478,000	81.4	24,049,000	5,988,519	52,240
1906.....	2,506,000	10.2	25,576,000	101.3	25,899,000	6,336,310	90,356
1907.....	2,864,000	9.0	25,851,000	95.6	24,713,000	4,277,313	57,419
1908.....	2,679,000	9.6	25,805,000	118.4	30,577,000	882,899	539,668
1909.....	2,083,000	9.5	19,699,000	152.8	30,093,000	65,193	5,002,496
1910 ¹	2,467,000	5.2	12,718,000	231.7	29,472,000	976	10,499,227
1911.....	2,737,000	7.0	19,370,000	182.1	35,272,000	4,323	6,841,806
1912.....	2,851,000	9.3	28,073,000	114.7	32,202,000	16,894	5,294,296
1913.....	2,291,000	7.8	17,853,000	119.9	21,399,000	305,546	8,653,235
1914.....	1,645,000	8.4	13,749,000	126.0	17,318,000	4,143	10,666,215
1915.....	1,387,000	10.1	14,030,000	174.0	24,410,000	2,614	14,679,233
1916.....	1,474,000	9.7	14,296,000	248.6	35,541,000	1,017	12,393,988
1917.....	1,984,000	4.6	9,164,000	296.6	27,182,000	21,481	13,366,529
1918.....	1,910,000	7.0	13,369,000	340.1	45,470,000	18,574	8,426,886
1919 ²	1,503,000	4.8	7,256,000	438.3	31,802,000	24,044	23,391,934
1920.....	1,757,000	6.1	10,774,000	176.7	19,039,000	11,481	16,170,413
1921 ³	1,165,000	7.0	8,112,000	144.6	11,732,000		

¹ Approximate.² Acreage adjusted to census basis.³ Preliminary estimate.

FLAX—Continued.

TABLE 93.—*Flaxseed: Acreage, production, and total farm value, by States, 1920-21.*

State.	Thousands of acres.		Production (thousands of bushels).		Total value, basis Dec. 1 price (thousands of dollars).	
	1920	1921	1920	1921	1920	1921
Wisconsin.....	9	6	99	63	210	94
Minnesota.....	320	287	3,040	2,726	5,563	4,116
Iowa.....	11	11	132	96	238	147
North Dakota.....	761	396	4,033	2,534	7,179	3,624
South Dakota.....	220	216	2,200	1,404	3,630	1,952
Nebraska.....	5	3	45	24	70	36
Kansas.....	23	20	159	134	286	181
Montana.....	407	225	1,058	1,125	1,852	1,575
Wyoming.....	1	1	8	6	11	7
United States.....	1,777	1,165	10,774	8,112	19,039	11,732

TABLE 94.—*Flaxseed: Condition of crop, United States, on first of months named, 1903-1921.*

Year.	July.	Aug.	Sept.	Oct.	Year.	July.	Aug.	Sept.	Oct.	Year.	July.	Aug.	Sept.	Oct.
1903...	P. ct.	P. ct.	P. ct.	P. ct.	1910...	P. ct.	P. ct.	P. ct.	P. ct.	1917...	P. ct.	P. ct.	P. ct.	P. ct.
1904...	80.2	80.3	80.5	74.0	1911...	65.0	51.7	48.3	47.2	1918...	84.0	60.6	50.2	51.3
1905...	86.6	78.9	85.8	87.0	1912...	80.9	71.0	68.4	69.6	1919...	79.8	70.6	72.6	70.8
1906...	92.7	96.7	94.2	91.5	1913...	88.9	87.5	86.3	83.8	1920...	73.5	52.7	50.5	52.6
1907...	93.2	92.2	89.0	87.4	1914...	82.0	77.4	74.9	74.7	1921...	89.1	80.1	63.8	62.8
1908...	91.2	91.9	85.4	78.0	1915...	90.5	82.1	72.9	77.4		82.7	70.0	62.3	66.8
1909...	92.5	86.1	82.5	81.2	1916...	88.5	91.2	87.6	84.5					
	95.1	92.7	88.9	84.9		90.3	84.0	84.8	86.2					

TABLE 95.—*Flaxseed: Forecasts of production, monthly, with preliminary and final estimates.*

[000 omitted.]

Year.	July.	August.	September.	October.	November production estimate.	Final estimate.
1912.....	Bushels. 28,000	Bushels. 28,000	Bushels. 29,000	Bushels. 29,000	Bushels. 29,755	Bushels. 28,073
1913.....	21,000	20,000	20,000	21,000	19,234	17,853
1914.....	17,665	16,820	15,428	16,826	15,973	13,749
1915.....	16,399	17,924	18,171	17,655	18,446	14,030
1916.....	14,467	14,118	14,895	15,411	15,300	14,296
1917.....	16,964	12,788	10,957	11,335	9,648	9,164
1918.....	15,792	14,834	15,905	15,606	14,646	13,369
1919.....	13,232	10,239	10,195	10,652	9,450	7,256
1920.....	14,398	14,260	11,821	11,704	10,736	10,774
Average.....	17,546	16,554	16,263	16,577	15,910	14,285
1921.....	9,671	8,911	8,252	8,878	8,509	¹ 8,112

¹ Preliminary.

FLAX—Continued.

TABLE 96.—*Flaxseed: Yield per acre, price per bushel Dec. 1, and value per acre, by States.*

	Yield per acre (bushels).						Farm price per bushel (cents).										Value per acre (dollars). ¹		
State.	5-year average, 1917-1921.	1917	1918	1919	1920	1921	10-year average, 1912-1921.	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	5-year average, 1916-1920.	1921
Wis. . .	10.8	.....	11.0	10.5	11.0	10.5	213	127	123	125	180	240	.....	330	430	212	150	33.39	15.75
Minn. .	9.4	9.5	10.4	8.0	9.5	9.5	220	120	123	128	176	240	295	341	445	183	151	27.37	14.34
Iowa. .	11.7	11.0	11.0	16.0	12.0	8.7	208	124	123	120	150	215	275	320	420	180	153	35.15	13.31
N. Dak	5.6	3.9	7.8	4.6	5.3	6.4	220	114	121	128	178	252	300	315	441	178	143	18.86	9.15
S. Dak	8.0	7.0	9.5	7.0	10.0	6.5	212	113	120	123	167	247	299	325	425	165	139	24.21	9.04
Nebr. .	7.4	5.5	9.5	5.0	9.0	8.0	202	128	110	119	147	230	250	330	400	155	150	19.49	12.00
Kans. .	6.4	7.0	5.6	6.3	6.9	6.7	205	130	116	125	145	231	290	330	380	180	135	17.35	9.04
Mont. .	3.0	3.0	3.0	1.3	2.6	5.0	215	112	115	120	170	248	295	338	440	175	140	10.56	7.00
Wyo. .	6.7	6.5	9.0	4.0	8.2	5.7	223	.....	.....	.....	145	225	261	325	350	135	118	17.41	6.73
U. S. .	5.9	4.6	7.0	4.8	6.1	7.0	218	114.7	119.9	126.0	174.0	218.6	296.6	340.1	438.3	176.7	144.6	18.72	10.07

¹ Based upon farm value Dec. 1.TABLE 97.—*Flaxseed: Farm price, cents per bushel on first of each month, 1908-1921.*

Year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Average.
1908.....	99.3	101.0	102.6	103.0	104.8	109.2	108.1	107.4	109.6	107.0	108.3	118.4	108.7
1909.....	123.2	129.8	141.3	145.6	148.7	153.4	153.2	137.0	123.1	122.8	130.8	152.9	138.5
1910.....	171.2	192.9	193.1	193.9	209.5	195.5	183.5	209.7	220.0	234.3	223.4	231.7	217.9
1911.....	221.1	233.9	210.7	234.6	241.9	225.0	205.6	199.2	203.6	205.0	210.6	182.1	207.8
1912.....	187.1	190.8	183.9	191.3	181.0	205.0	193.4	175.2	162.6	147.7	133.4	114.7	148.6
1913.....	106.2	109.3	119.0	113.6	114.3	115.8	113.4	118.6	127.8	122.6	118.7	119.9	117.7
1914.....	124.2	127.8	132.5	132.8	134.7	136.8	136.0	150.7	139.3	127.4	118.7	126.0	125.6
1915.....	134.8	163.7	157.9	167.7	169.6	163.5	152.5	144.6	143.5	148.1	162.9	174.0	159.5
1916.....	185.9	210.9	202.5	202.1	191.8	176.5	163.2	178.1	190.2	199.2	234.7	248.6	218.4
1917.....	250.7	253.7	253.1	266.1	300.6	298.8	278.0	271.6	302.8	308.5	295.9	296.6	288.7
1918.....	310.8	326.7	349.8	379.7	373.3	363.6	349.3	410.5	381.2	380.9	333.8	340.1	345.5
1919.....	327.7	310.1	327.4	348.7	361.4	389.3	444.1	540.6	517.5	433.2	382.3	438.3	395.5
1920.....	433.6	456.5	472.7	455.7	448.2	421.1	359.6	303.7	290.3	279.7	240.1	176.7	280.2
1921.....	163.7	156.3	150.4	142.6	125.7	145.7	145.8	162.1	164.8	162.9	145.0	144.6	150.5
Average, 1912-1921.	222.5	230.6	234.9	240.0	240.1	242.2	234.0	245.6	242.0	231.5	216.6	218.0	224.2

FLAX—Continued.

TABLE 98.—*Flaxseed: Monthly marketings by farmers, 1916-1921.*

Month.	Estimated amount sold monthly by farmers of United States (millions of bushels).						Per cent of year's sales.					
	1916-17	1917-18	1918-19	1919-20	1920-21	5-yr. aver.	1916-17	1917-18	1918-19	1919-20	1920-21	5-yr. aver.
July.....	0.2	0.1	0.2	0.3	0.2	0.2	1.2	1.8	1.8	3.6	2.1	2.1
August.....	.3	.3	.4	.6	.5	.4	2.2	3.6	2.9	8.0	4.7	4.3
September.....	1.7	1.6	1.8	1.4	2.4	1.8	12.7	21.5	14.8	20.6	23.6	18.6
October.....	4.7	2.1	2.7	1.6	2.9	2.8	35.6	28.1	21.5	22.2	28.6	27.2
November.....	3.2	1.3	1.9	.8	1.3	1.7	24.3	17.6	15.0	11.1	13.0	16.2
December.....	1.5	.6	1.4	.5	.6	.9	11.4	7.6	10.9	7.4	6.2	8.7
January.....	.6	.3	.6	.3	.5	.5	4.4	4.7	5.2	5.0	5.0	4.9
February.....	.2	.3	.6	.4	.3	.4	1.7	4.0	4.4	6.3	3.3	2.9
March.....	.3	.4	.7	.2	.3	.4	2.0	4.8	5.8	3.1	3.1	3.8
April.....	.1	.1	.5	.2	.2	.2	.9	1.8	4.3	3.1	2.1	2.4
May.....	.2	.1	.6	.2	.3	.3	1.6	1.6	5.0	2.6	3.4	2.8
June.....	.3	.2	1.0	.5	.5	.5	2.0	2.9	8.1	7.0	4.9	5.1
Season...	13.3	7.4	12.4	7.0	10.0	10.1	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 99.—*Flaxseed: Extent and causes of yearly crop losses, 1909-1920.*

Year.	Deficient moisture.	Excessive moisture.	Floods.	Frost and freeze.	Hail.	Hot winds.	Storms.	Total climatic.	Plant disease.	Insect pests.	Animal pests.	Defective seed.	Total.
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
1920.....	23.2	1.3	0.3	0.6	1.7	4.4	0.2	31.7	4.4	3.7	(¹)	0.1	41.4
1919.....	38.0	.4	.1	.5	2.0	2.1	(¹)	45.5	3.7	10.6	0.1	(¹)	60.2
1918.....	28.2	.2	.1	2.2	2.3	2.3	.2	34.8	1.0	2.6	(¹)	.1	39.3
1917.....	51.3	.3	(¹)	2.9	1.2	2.2	(¹)	59.3	1.2	1.2	(¹)	.1	62.3
1916.....	2.3	2.3	.3	1.4	1.7	2.8	.3	12.4	3.9	.1	(¹)	.1	17.2
1915.....	2.1	2.0	.3	2.5	2.1	2.4	.2	16.1	2.8	.1	(¹)	.4	20.0
1914.....	11.4	1.7	.2	2.0	1.9	6.6	.2	24.1	2.8	.5	.2	(¹)	29.1
1913.....	24.3	.7	.1	1.0	1.7	2.2	.2	30.6	1.6	.2	.....	.4	34.5
1912.....	5.1	2.9	.2	5.9	2.8	1.1	.8	19.0	3.7	.4	(¹)	1.4	28.6
1911.....	16.4	1.1	.....	8.4	.9	2.8	.1	30.5	2.8	1.7	(¹)	.2	36.3
1910.....	49.4	(¹)	.....	2.5	.9	6.2	.1	59.3	1.3	1.7	(¹)	.1	61.1
Average.....	22.8	1.2	.2	3.4	1.7	3.2	.2	33.0	2.5	2.1	.1	.3	39.1

¹ Less than 0.05 per cent.

FLAX—Continued.

TABLE 100.—*Flaxseed: Monthly and yearly average price per bushel, Minneapolis, 1910-11 to 1921-22.*¹

Crop year.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Average.
1910-11.....	\$2.66	\$2.62	\$2.61	\$2.42	\$2.60	\$2.68	\$2.66	\$2.56	\$2.47	\$2.24	\$2.10	\$2.84	\$2.49
1911-12.....	2.47	2.35	2.04	2.06	2.15	2.06	2.06	2.15	2.23	2.23	1.97	1.88	2.14
1912-13.....	1.76	1.60	1.35	1.25	1.29	1.34	1.26	1.29	1.30	1.31	1.38	1.47	1.33
1913-14.....	1.45	1.38	1.35	1.44	1.49	1.53	1.55	1.51	1.56	1.59	1.68	1.64	1.52
1914-15.....	1.51	1.33	1.45	1.54	1.83	1.86	1.91	1.93	1.95	1.76	1.67	1.67	1.70
1915-16.....	1.70	1.86	1.99	2.07	2.31	2.32	2.27	2.13	1.96	1.80	1.96	2.15	2.04
1916-17.....	2.11	2.54	2.78	2.84	2.89	2.81	2.90	3.18	3.33	3.11	3.01	3.46	2.91
1917-18.....	3.38	3.13	3.29	3.40	3.60	3.74	4.08	4.09	3.93	3.86	4.40	4.39	3.78
1918-19.....	4.09	3.59	3.77	3.54	3.41	3.45	3.73	3.88	4.12	4.36	5.94	5.87	4.19
1919-20.....	4.92	4.32	4.83	4.99	5.12	5.09	5.02	4.68	4.53	3.92	3.48	3.28	4.52
1920-21.....	3.23	2.83	2.27	2.06	1.96	1.82	1.78	1.58	1.84	1.86	1.89	2.01	2.09
1921-22.....	2.03	1.81	1.79	1.91									
11-year average	2.66	2.51	2.52	2.51	2.60	2.61	2.66	2.64	2.66	2.60	2.68	2.74	2.61

¹ From Annual Reports of Minneapolis Chamber of Commerce and Daily Market Record.TABLE 101.—*Flaxseed: Monthly and yearly average price per gallon of linseed oil, New York, 1910-11 to 1921-22.*¹

Crop year.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Average.
1910-11.....	\$0.90	\$0.90	\$0.95	\$0.95	\$0.95	\$0.96	\$0.96	\$0.91	\$0.91	\$0.89	\$0.87	\$0.80	\$0.91
1911-12.....	.87	.88	.84	.71	.74	.71	.70	.73	.73	.76	.77	.96	.76
1912-13.....	.66	.62	.56	.43	.42	.46	.45	.44	.46	.45	.47	.49	.49
1913-14.....	.50	.47	.46	.48	.48	.48	.50	.51	.50	.50	.52	.59	.50
1914-15.....	.57	.49	.44	.45	.48	.56	.55	.58	.62	.63	.54	.50	.53
1915-16.....	.52	.55	.60	.61	.66	.72	.77	.76	.75	.67	.63	.71	.66
1916-17.....	.70	.82	.90	.92	.94	.95	.94	1.07	1.21	1.21	1.12	1.18	1.00
1917-18.....	1.25	1.18	1.15	1.21	1.29	1.29	1.41	1.57	1.57	1.57	1.64	1.88	1.42
1918-19.....	1.90	1.83	1.55	1.58	1.50	1.45	1.48	1.54	1.61	1.81	2.10	2.22	1.71
1919-20.....	2.04	1.79	1.75	1.82	1.77	1.77	1.80	1.88	1.69	1.65	1.52	1.41	1.74
1920-21.....	1.22	1.20	.98	.82	.78	.66	.66	.61	.70	.75	.75	.71	.82
1921-22.....	.74	.68	.67	.67									
11-year average	1.01	.98	.93	.91	.91	.91	.93	.96	.98	.99	.99	1.02	.96

¹ Figures for 1910-1915 from Monthly Labor Review; 1916-1918 from War Industries Board Price Bulletin; 1919-1921 from Oil, Paint, and Glass Reporter.

FLAX—Continued.

TABLE 102.—*Flaxseed: Monthly and yearly receipts at Minneapolis, 1910-11 to 1921-22.*¹

[In thousands of bushels; 1. e., 000 omitted.]

Crop year.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Total.
1910-11.....	854	1,530	1,202	535	338	300	232	112	118	122	133	191	5,757
1911-12.....	553	1,212	1,570	1,716	531	459	397	468	571	440	487	160	8,574
1912-13.....	799	1,657	1,520	2,245	1,450	1,246	1,057	742	518	514	432	281	12,382
1913-14.....	756	1,686	1,505	1,131	711	478	592	270	139	165	233	117	7,783
1914-15.....	901	1,890	1,247	1,016	599	443	384	142	77	146	239	115	7,199
1915-16.....	317	1,038	1,506	1,113	319	399	810	486	440	363	441	199	7,461
1916-17.....	316	2,380	1,694	1,045	544	442	441	384	263	565	325	92	8,491
1917-18.....	265	980	1,112	614	533	553	527	283	349	648	208	94	6,166
1918-19.....	536	915	857	783	558	473	829	439	436	942	642	196	7,611
1919-20.....	753	570	568	492	344	368	409	159	295	522	554	297	5,321
1920-21.....	580	1,444	861	699	298	269	364	434	578	572	338	289	6,726
1921-22.....	500	1,144	375	354	.....	.....	.....	.....	.....	.....	.....	.....	.....
11-year average	597	1,391	1,248	1,036	566	494	549	356	311	451	367	185	7,587

¹ Compiled from Minneapolis Chamber of Commerce Reports and Daily Market Record.TABLE 103.—*Flaxseed: International trade, calendar years 1911-1920.*

[See "General note," Table 17.]

Year.	Argentina.		Australia.		Austria-Hungary.		Belgium.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.
1911.....	(¹)	16,369	58	(¹)	1,426	38	8,953	6,031
1912.....	1	20,290	111	(¹)	1,788	48	8,780	5,880
1913.....	(¹)	40,027	139	(¹)	2,526	36	10,200	5,980
1914.....	(¹)	33,132	180	(¹)	.....	.....	.....	.....
1915.....	3	38,627	350	(¹)	.....	.....	.....	.....
1916.....	.....	25,192	395	(¹)	.....	.....	.....	.....
1917.....	.....	5,563	617	(¹)	.....	.....	.....	.....
1918.....	.....	15,408	803	(¹)	.....	.....	.....	.....
1919.....	(¹)	33,677	369	(¹)	.....	.....	1,009	38
1920.....	.....	39,952	.....	.....	.....	.....	827	111
	British India.		Canada.		China.		Finland.	
1911.....	.....	.....	256	804	.....	.....	2 117	(¹)
1912.....	353	14,133	6	8,181	.....	900	2 105	(¹)
1913.....	294	14,685	5	22,949	.....	396	2 107	(¹)
1914.....	342	14,067	(¹)	7,953	.....	444	2 124	.....
1915.....	155	7,188	77	2,021	.....	364	2 258	.....
1916.....	335	15,559	1	4,825	.....	482	2 224	.....
1917.....	314	7,439	2	6,275	.....	333	2 104	.....
1918.....	379	8,867	13	2,088	63	210	2 30	.....
1919.....	243	13,341	27	1,173	27	555	85	.....
1920.....	280	7,839	617	1,519	3	242	105	.....

¹ Less than 500 bushels.² Includes hempseed.

FLAX—Continued.

TABLE 103.—Flaxseed: International trade, calendar years 1911–1920—Continued.

Year.	France.		Germany.		Italy.		Japan.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.
1911.....	4,147	109	10,879	250	1,619	1	27	27
1912.....	5,418	31	12,995	213	1,588	(1)	.....	.....
1913.....	9,346	41	22,063	167	1,788	2	.....	.....
1914.....	4,861	78	.....	.....	1,275	(1)	.....	.....
1915.....	1,322	73	.....	.....	1,509	(1)	77	.....
1916.....	2,471	65	.....	.....	1,055	(1)	272	90
1917.....	1,886	49	.....	.....	888	.....	149	203
1918.....	1,028	5	.....	.....	141	(1)	262	78
1919.....	4,001	22	.....	.....	519	(1)	347	344
1920.....	1,284	67	2,089	13	871	(1)	114	74
	Morocco (French).		Netherlands.		Norway.		Rumania.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.
1911.....	.....	414	6,738	1,691	361	.....	38	113
1912.....	.....	530	8,225	2,373	395	.....	5	98
1913.....	.....	69	11,261	3,400	579	.....	15	119
1914.....	.....	419	10,304	2,731	470	.....	7	142
1915.....	.....	281	13,414	149	519	.....	78	(1)
1916.....	.....	82	6,814	136	492	.....	.....	.....
1917.....	.....	169	777	237	239	.....	.....	.....
1918.....	.....	153	3	178	(1)	.....	.....	.....
1919.....	.....	.....	3,808	90	351	.....	6	.....
1920.....	.....	706	3,826	179	332	.....	.....	.....
	Russia.		Sweden.		Tunis.		United Kingdom.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.
1911.....	60	6,310	791	(1)	(1)	25	10,518	.....
1912.....	92	6,588	805	(1)	(1)	23	11,246	.....
1913.....	87	4,289	1,137	22	(1)	70	25,961	.....
1914.....	48	3,641	981	31	(1)	18	19,055	.....
1915.....	39	428	1,166	(1)	(1)	51	16,287	.....
1916.....	.....	829	1,011	.....	(1)	12	20,023	.....
1917.....	.....	.....	9	.....	(1)	7	8,026	.....
1918.....	.....	.....	67	.....	(1)	41	10,476	.....
1919.....	.....	.....	695	(1)	3	38	21,977	.....
1920.....	.....	.....	1,085	.....	1	36	15,520	.....
	United States.		Uruguay.		Other countries.		Total.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.
1911.....	7,480	1	.....	520	379	127	53,852	32,893
1912.....	7,833	20	.....	653	513	208	60,359	60,174
1913.....	6,580	283	.....	1,804	832	81	92,920	94,420
1914.....	9,247	24	.....	1,069	976	48	47,870	63,797
1915.....	14,697	5	.....	564	1,387	24	51,338	49,775
1916.....	13,098	2	.....	322	1,530	10	47,721	47,608
1917.....	9,394	5	.....	14	289	34	22,694	20,323
1918.....	12,974	26	.....	105	64	136	26,303	27,265
1919.....	14,036	17	.....	541	733	90	48,230	49,926
1920.....	24,641	16	.....	784	1,064	53	52,659	51,561

1 Less than 500 bushels.

RICE.

TABLE 104.—Rice: Area and production in undermentioned countries, 1909-1920.

Country.	Area.				Production.			
	Average 1909- 1912. ¹	1918	1919	1920	Average 1909-1913. ¹	1918	1919	1920
NORTH AMERICA.								
United States.....	1,000 acres. 749	1,000 acres. 1,119	1,000 acres. 1,063	1,000 acres. 1,336	1,000 pounds. 681,166	1,000 pounds. 1,072,389	1,000 pounds. 1,166,250	1,000 pounds. 1,448,278
Hawaii.....	79		² 6		² 25,820		² 18,254	
Porto Rico.....	16				4,298			
Central America:								
Guatemala.....		43	14	6	2,680	16,997	5,185	2,235
Costa Rica.....	7		1					
Honduras.....					8,100			
Mexico.....	162	180			164,299	² 24,787		
SOUTH AMERICA.								
Argentina.....	20				24,057			
Brazil (Sao Paulo).....	228				99,514	242,110	265,254	
British Guiana.....	38		61	54	69,078	³ 41,300	103,222	² 55,555
Dutch Guiana.....					2,751	³ 17,649		
Peru.....	138				100,976			
EUROPE.								
Bulgaria.....	47	414	4	6	47,767	47,567	5,474	5,612
France.....	41				42,017			
Italy.....	361	342	325	276	646,470	712,412	662,340	611,030
Russia (Northern Cauca- sia) ⁴	2				1,049			
Spain.....	95	111	112	120	297,468	282,419	411,816	393,759
ASIA.								
India:								
British India.....	70,591	79,508	79,426	78,023	72,949,786	55,218,240	71,612,800	62,792,920
Native States.....	2,498				2,634,720			
Ceylon.....	708	679			348,614			
Federated Malay States.....	125				80,398			
Japanese Empire:								
Japan.....	7,357	7,580	7,497	7,661	14,008,517	17,183,992	19,106,369	19,849,470
Formosa.....	1,198		1,227	1,213	1,186,174		1,185,154	1,544,810
Chosen.....	2,416				2,455,522	3,376,112	2,915,060	
Java and Madura.....	6,021	7,128	8,465	8,080	7,349,417	8,464,575	7,051,451	6,480,234
Indo-China.....			10,173	11,762		6,301,999	4,637,825	6,283,361
Philippine Islands.....	2,288	3,381	3,413	3,669	1,123,805	2,209,585	1,976,821	2,120,642
Russia, Transcaucasia and Turkestan ⁴	614				378,401			
Straits Settlements.....	92				123,204			
Siam.....	5,286				6,510,985		5,443,467	3,538,216
AFRICA.								
Egypt (Lower).....	241	385	150	165	552,833	691,965	606,870	634,444
Madagascar.....					953,000	1,545,000		
Nyasaland.....					2,212			
OCEANIA.								
Australia.....					75			
Fiji.....	12				5,916			

¹ Five-year average except in a few cases where statistics were unavailable.² Census.³ Unofficial.⁴ Old boundaries.

RICE—Continued.

TABLE 105.—Rice (cleaned): World production so far as reported, 1900-1920.

Year	Production.	Year.	Production.	Year.	Production.
<i>Pounds.</i>		<i>Pounds.</i>		<i>Pounds.</i>	
1900.....	103,400,000,000	1907.....	110,300,000,000	1914.....	114,700,000,000
1901.....	91,300,000,000	1908.....	107,900,000,000	1915.....	114,700,000,000
1902.....	70,600,000,000	1909.....	127,500,000,000	1916.....	112,000,000,000
1903.....	200,800,000,000	1910.....	129,100,000,000	1917.....	122,000,000,000
1904.....	110,700,000,000	1911.....	102,100,000,000	1918.....	87,400,000,000
1905.....	102,400,000,000	1912.....	87,300,000,000	1919.....	117,200,000,000
1906.....	103,800,000,000	1913.....	100,700,000,000	1920.....	103,800,000,000

TABLE 106.—Rice: Acreage, production, value, exports, etc., in the United States, 1904-1921.

(See headnote of Table 4.)

Year.	Acreage.	Average yield per acre.	Production.	Average farm price per bushel Dec. 1.	Farm value Dec. 1.	Domestic exports, year beginning July 1. ¹	Net imports, year beginning July 1. ¹
	<i>Acres.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Cents.</i>	<i>Dollars.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1904.....	662,000	31.9	21,096,000	65.8	13,892,000	5,964,814	3,501,337
1905.....	482,000	28.2	13,607,000	95.2	12,956,000	3,612,289	5,593,750
1906.....	575,000	31.1	17,855,000	90.3	16,121,000	3,790,080	7,264,859
1907.....	627,000	29.9	18,738,000	85.8	16,081,000	3,083,788	7,333,910
1908.....	655,000	33.4	21,890,000	81.2	17,771,000	3,406,070	7,760,164
1909.....	610,000	33.8	20,607,000	79.5	16,392,000	4,487,287	7,820,643
1910 ²	723,000	23.0	24,510,000	67.8	16,624,000	5,134,355	7,292,960
1911.....	696,000	32.9	22,934,000	79.7	18,274,000	5,821,598	6,467,505
1912.....	723,000	31.7	25,054,000	93.5	23,423,000	5,672,996	7,539,206
1913.....	827,000	31.1	25,744,000	85.8	22,090,000	5,871,289	9,806,684
1914.....	694,000	34.1	23,649,000	92.4	21,849,000	7,334,389	7,848,181
1915.....	803,000	36.1	28,917,000	90.6	26,212,000	9,506,099	6,931,061
1916.....	889,000	47.0	40,861,000	88.9	36,311,000	12,315,488	6,180,934
1917.....	981,000	35.4	34,739,000	189.6	65,879,000	11,886,265	13,095,243
1918.....	1,119,000	34.5	38,606,000	191.8	74,042,000	12,892,186	5,309,014
1919 ²	1,068,000	39.5	41,985,000	266.6	111,913,000	22,899,771	3,001,362
1920.....	1,336,000	39.0	52,066,000	119.1	62,036,000	22,449,930	1,267,391
1921 ³	911,000	40.1	36,515,000	95.3	34,802,000	.....	.....

¹ Domestic exports here include also shipments from the United States to Porto Rico and Hawaii; net imports are total imports minus reexports. Bushels are computed from pounds as reported in original by assuming 1 bushel of rough rice to yield 27½ pounds of cleaned rice.

² Acreage adjusted to census basis.

³ Preliminary estimate.

TABLE 107.—Rice: Acreage, production, and farm value, by States, 1920.

State.	Thousands of acres.		Production (thousands of bushels).		Total value, basis Dec. 1 price (thousands of dollars).	
	1920	1921	1920	1921	1920	1921
South Carolina.....	7	7	175	175	508	170
Georgia.....	4	3	104	78	234	72
Florida.....	3	4	72	88	126	85
Alabama.....	1	1	31	20	90	20
Mississippi.....	3	1	93	20	186	21
Louisiana.....	760	480	25,200	16,560	27,720	14,242
Texas.....	281	155	9,554	5,596	11,942	5,652
Arkansas.....	175	125	8,575	6,682	11,233	6,153
California.....	162	135	8,262	7,490	9,997	8,584
United States.....	1,336	911	52,066	30,515	62,036	34,802

RICE—Continued.

TABLE 108.—*Rice: Condition of crop, United States, on first of months named, 1904–1921*

Year.	July 1.	Aug. 1.	Sept. 1.	When harvested.	Year.	July 1.	Aug. 1.	Sept. 1.	When harvested.	Year.	July 1.	Aug. 1.	Sept. 1.	When harvested.
1904....	88.2	90.2	89.7	87.3	1910....	86.3	87.6	88.8	88.1	1916....	92.7	92.2	91.2	91.5
1905....	88.0	92.9	92.2	89.3	1911....	87.7	88.3	87.2	85.4	1917....	85.1	85.0	78.4	79.7
1906....	82.9	83.1	86.8	87.3	1912....	86.3	86.3	88.8	89.2	1918....	91.1	85.7	83.7	85.4
1907....	88.7	88.6	87.0	88.7	1913....	88.4	88.7	88.0	80.3	1919....	83.5	90.4	91.9	91.3
1908....	92.9	94.1	93.5	87.7	1914....	86.5	87.6	88.9	88.0	1920....	90.0	88.7	88.3	88.1
1909....	90.7	84.5	84.7	81.2	1915....	90.5	90.0	82.3	80.9	1921....	88.0	86.5	83.8	84.6

TABLE 109.—*Rice: Forecasts of production, monthly, with preliminary and final estimates.*

[000 omitted.]

Year.	July.	August.	September.	October.	Final estimate.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1912.....	23,000	23,000	23,000	24,000	25,054
1913.....	27,000	27,000	27,000	25,000	25,744
1914.....	23,619	23,925	24,437	24,453	23,649
1915.....	29,921	29,762	26,261	26,251	28,947
1916.....	34,182	34,193	32,823	33,160	40,861
1917.....	34,372	34,566	32,237	33,256	34,739
1918.....	43,373	41,593	40,879	41,918	38,606
1919.....	42,487	43,427	44,383	44,261	41,985
1920.....	52,055	52,000	52,152	52,298	52,066
Average.....	34,445	34,385	33,686	33,844	34,628
1921.....	33,603	33,480	32,661	33,020	36,515

¹ Preliminary.

TABLE 110.—*Rice: Yield per acre, price per bushel Dec. 1, and value per acre, by States.*

State.	Yield per acre (bushels).						Farm price per bushel (cents).												Value per acre (dollars). ¹	
	5-year average, 1917-1921.	1917	1918	1919	1920	1921	10-year average, 1912-1921.	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	5-year average, 1916-1920.	1921	
S. C.....	24.4	25.0	23.0	24.0	25.0	25.0	153	93	90	92	90	90	195	195	300	290	97	50.14	24.25	
Ga.....	26.4	30.0	26.0	24.0	26.0	26.0	140	90	83	89	88	87	195	175	275	225	92	49.18	23.92	
Fla.....	24.4	26.0	24.0	26.0	22.0	22.0	124	90	60	70	75	75	195	140	263	175	97	42.69	21.34	
Ala.....	25.9	27.0	25.0	26.4	31.0	20.0	137	90	60	70	75	75	190	150	270	290	100	53.75	20.00	
Miss.....	26.6	30.0	23.0	29.1	31.0	20.0	126	90	70	85	88	80	190	150	190	200	118	46.24	23.60	
La.....	33.1	31.0	28.8	35.2	36.0	34.5	130	93	84	93	90	90	190	195	271	110	86	58.29	29.67	
Texas.....	32.8	30.0	32.0	32.0	34.0	36.1	135	94	86	92	89	86	200	197	280	125	101	58.77	36.46	
Ark.....	45.5	41.0	37.9	46.0	49.0	53.5	130	94	90	90	95	96	190	180	240	131	92	73.84	49.22	
Calif.....	58.7	68.0	65.5	60.0	51.0	54.0	133	91	100	100	90	78	175	190	267	121	115	102.36	62.10	
U. S.....	37.5	35.4	34.5	39.5	39.0	40.1	131.3	93.5	85.8	92.4	90.6	88.9	189.6	191.8	266.6	119.1	95.3	65.37	38.20	

¹ Based upon farm price Dec. 1.

RICE—Continued.

TABLE 111.—Rice: Extent and causes of yearly crop losses, 1909–1920.

Year.	Deficient mois- ture.	Excessive mois- ture.	Floods.	Frost and freeze.	Hail.	Hot winds.	Storms.	Total climate.	Plant disease.	Insect pests.	Animal pests.	Defective seed.	Total.
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
1920.....	0.5	8.0	0.4	.....	.....	1.2	0.2	10.3	3.1	1.6	.....	.....	16.7
1919.....	1.0	12.8	1.1	0.3	.....	1	2.6	18.4	.3	.5	0.7	0.1	20.0
1918.....	7.2	7.2	2.5	.2	.....	.4	1.5	19.0	.3	1.2	(¹)	.....	21.7
1917.....	17.3	.7	.1	1.5	0.1	.1	.1	20.0	.5	.2	.5	.1	25.4
1916.....	4.8	.2	.....	.4	.....	.3	.2	6.2	1.1	.3	.....	.2	9.5
1915.....	7.0	.6	.1	.3	.....	.4	8.1	16.7	.4	.2	.....	(¹)	19.4
1914.....	5.3	2.3	.1	.....	(¹)	.6	.6	10.1	.1	1.3	(¹)	.3	17.5
1913.....	3.9	14.3	5.8	.....	.....	(¹)	.....	24.1	.1	.7	.....	.....	28.5
1912.....	3.1	1.1	6.2	.....	.....	.6	.5	11.6	2.5	2.0	.5	.6	19.6
1911.....	6.5	3.2	.....	.2	.....	.7	.....	10.6	.7	.6	.5	.1	14.5
1910.....	7.2	1.7	.....	.1	.....	.1	1.0	10.1	3.4	.4	1.2	.3	17.3
1909.....	4.6	.1	.....	.....	.....	1.1	6.6	12.4	2.7	.9	.2	.1	17.0
Average.....	5.7	4.4	2.0	.4	(¹)	.5	2.1	14.1	1.3	.8	.4	.2	18.9

¹ Less than 0.05 per cent.

TABLE 112.—Rice: International trade, calendar years 1909–1920.

Mostly cleaned rice. Under rice is included paddy, unhulled, rough, cleaned, polished, broken, and cargo rice, in addition to rice flour and meal. Rice bran is not included. Rough rice or paddy, where specifically reported, has been reduced to ratio of 162 pounds of rough or unhulled to 100 pounds of cleaned. "Rice, other than whole or cleaned rice," in the returns of United Kingdom is not considered paddy, since the chief sources of supply indicate that it is practically all hulled rice. Cargo rice, a mixture of hulled and unhulled, is included without being reduced to terms of cleaned. Broken rice and rice flour and meal are taken without being reduced to terms of whole cleaned rice. See "General note," Table 17.

Country.	Average, 1909–1913.		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORT- ING COUNTRIES.								
	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.
British India.....	278,272	5,337,516	341,532	5,488,517	285,928	1,581,737	176,082	2,390,397
French Indo-China.....	41	2,288,040	.....	3,550,283	.....	2,109,962	.....	.....
Siam.....	.....	1,928,507	8	1,893,336	2	987,873	5	621,398
PRINCIPAL IMPORT- ING COUNTRIES.								
Austria-Hungary...	183,411	461	.....	.....	.....	.....	128,405	.....
Belgium.....	180,830	99,948	.....	.....	27,527	8,233	49,192	5,523
Brazil.....	24,733	2 102	2	61,726	2	62,671	14	296,758
Ceylon.....	821,654	.....	762,405	(³)	650,324	.....	678,555	.....
China.....	704,992	.....	931,203	4,437	241,300	163,692	153,567	41,578
Cuba.....	262,207	.....	387,892	.....	324,412	.....	.....	.....
Dutch East Indies...	1,178,111	132,400	1,583,573	5,073	610,532	9,031	.....	.....
Egypt.....	98,690	53,700	10,510	28,838	203	49,425	383	8,974
France.....	517,861	79,087	379,862	3,867	349,761	23,404	197,119	36,991
Germany.....	913,772	396,628	.....	.....	.....	.....	172,865	1,362
Japan.....	655,676	61,936	1,549,056	57,744	1,547,461	19,813	157,028	25,682
Mauritius.....	132,543	4 1,446	131,665	.....	96,619	.....	142,049	.....
Netherlands.....	778,682	476,276	10,755	3	44,830	223	49,618	2,490
Penang.....	511,035	357,543	522,641	393,572	.....	.....	301,029	193,904
Perak.....	179,187	43,312	11,229	.....	.....	2,891	101,165	20,605
Philippine Islands.....	412,781	4	428,807	266	118,023	110	170,491	69
Russia.....	250,461	5,746	.....	.....	.....	.....	.....	.....
Selangor.....	159,178	6 173	.....	666	.....	540	189,938	7
Singapore.....	975,095	758,095	1,385,009	1,135,513	445,828	.....	445,193	221,850
United Kingdom.....	768,853	90,564	849,032	1,513	163,308	89,074	422,231	32,263
United States.....	209,814	16,215	536,089	167,933	376,876	131,647	131,647	392,613
Other countries.....	1,242,051	592,361	1,368,208	123,416	495,436	51,046	230,302	130,249
Total.....	11,439,950	12,720,845	11,178,249	12,928,111	5,401,546	5,536,602	3,796,878	4,428,713

¹ Austria only, new boundaries.² Three-year average.³ Four-year average.⁴ Two-year average.⁵ One year.

CEREALS CONSUMED.

TABLE 113.—*Consumption of specified cereals in selected countries, yearly average, 1909-1918.*

Country and period.	Barley. ¹		Corn. ²		Oats.	
	Total.	Per capita.	Total.	Per capita.	Total.	Per capita.
Austria-Hungary:	1,000 bush.	Bushels.	1,000 bush.	Bushels.	1,000 bush.	Bushels.
1909-1913.....	140,396	2.71	231,675	4.47	241,584	4.57
Belgium:						
1909-1913.....	19,303	2.57	17,267	2.30	49,090	6.55
France:						
1909-1913.....	52,552	1.33	42,035	1.06	339,865	8.59
1914-1918.....	43,796	1.16	28,857	.75	279,832	7.41
Germany:						
1909-1913.....	302,601	4.60	31,967	.49	555,227	9.05
India (British):						
1909-1913.....	³ 33,010	.14	87,240	.36		
1914-1918.....	136,325	.54	89,146	.36		
Italy:						
1909-1913.....	10,922	.21	114,852	3.31	45,095	1.30
1914-1918.....	11,179	.31	101,011	2.77	36,431	1.55
Japan:						
1909-1913.....	89,542	1.73	³ 3,391	.07		
1914-1918.....	88,407	1.59	3,930	.07		
Netherlands:						
1909-1913.....	14,334	2.38	21,735	3.60	26,607	4.41
1914-1918.....	6,463	1.00	17,445	2.69	22,765	3.53
United Kingdom:						
1909-1913.....	112,820	2.50	80,602	1.78	249,129	5.51
1914-1918.....	87,044	2.00	58,287	1.34	246,879	5.66
United States: ⁴						
1909-1913.....	168,859	1.80	2,669,048	23.50	1,106,063	11.81
1914-1918.....	188,516	1.87	2,719,373	26.99	1,309,844	13.00

Country and period.	Rice. ⁵		Rye. ⁶		Wheat. ⁶	
	Total.	Per capita.	Total.	Per capita.	Total.	Per capita.
Austria-Hungary:	1,000 lbs.	Pounds.	1,000 bush.	Bushels.	1,000 bush.	Bushels.
1909-1913.....	182,921	3.53	102,857	3.15	228,110	4.41
Belgium:						
1909-1913.....	80,882	10.79	27,564	3.08	63,973	8.53
France:						
1909-1913.....	440,791	11.14	51,844	1.31	360,927	9.12
1914-1918.....	409,910	12.44	30,831	.82	294,950	7.81
Germany:						
1909-1913.....	517,145	7.86	418,798	6.37	220,458	3.35
India (British):						
1909-1913.....	67,890,542	277.94			301,147	1.23
1914-1918.....	66,053,356	263.58			304,056	1.21
Italy:						
1909-1913.....	518,308	14.94	5,946	.17	236,479	6.82
1914-1918.....	853,588	23.50	5,963	.16	242,030	6.65
Japan:						
1909-1913.....	14,602,192	282.03			29,338	.37
1914-1918.....	18,040,238	324.89			28,098	.53
Netherlands:						
1909-1913.....	302,407	50.15	27,961	4.64	26,952	4.47
1914-1918.....	109,190	16.74	14,146	2.17	22,831	3.54
United Kingdom:						
1909-1913.....	678,290	15.01	3,873	.09	277,535	6.14
1914-1918.....	883,137	20.26	3,478	.08	264,808	6.08
United States: ⁴						
1909-1913.....	874,765	9.34	31,580	.34	531,813	5.68
1914-1918.....	1,102,844	10.35	41,335	.41	597,475	5.93

¹ Includes malt converted to barley.² Includes corn meal converted to corn.³ Two-year average 1912-13.⁴ Includes insular possessions.⁵ Mostly cleaned and includes rice flour, rice meal, and broken rice.⁶ Includes flour converted to grain.

STATISTICS OF CROPS OTHER THAN GRAIN CROPS.

POTATOES.

TABLE 114.—Potatoes: Area and production in undermentioned countries, 1909-1921.

Country.	Area.				Production.			
	Average, ¹ 1909- 1913.	1919	1920	1921	Average, ¹ 1909- 1913.	1919	1920	1921
NORTH AMERICA.	<i>1,000 acres.</i>	<i>1,000 acres.</i>	<i>1,000 acres.</i>	<i>1,000 acres.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>
United States.....	3,680	3,542	3,657	3,815	350,627	322,867	403,296	346,823
Canada:								
Prince Edward Island.....	32	36	36	37	5,901	4,529	6,175	5,966
Nova Scotia.....	32	62	50	39	6,627	9,962	10,209	6,414
New Brunswick.....	42	76	78	75	8,898	10,790	15,510	16,192
Quebec.....	120	316	311	222	19,723	57,280	57,633	39,089
Ontario.....	155	137	153	161	20,720	15,145	23,962	15,400
Manitoba.....	26	42	37	38	4,755	5,288	3,410	5,858
Saskatchewan.....	29	66	54	59	4,812	11,250	6,861	10,344
Alberta.....	24	40	43	51	3,934	8,211	7,138	8,143
British Columbia.....	14	18	13	17	3,128	3,060	2,933	2,940
Total Canada.....	475	819	785	702	78,498	125,375	133,831	107,346
Mexico.....						452		
Newfoundland.....					1,495			
Total North America.....	4,155				437,544			
SOUTH AMERICA.								
Argentina.....	235		324		40,216			
Chile.....	66	78	77	94	8,023	2 8,700	10,944	11,837
Total South America.....	301		401		48,239			
EUROPE.								
Austria.....	3 3,105	239	290	313	3 456,485	2 20,022	24,600	26,207
Croatia Slavonia ³	193				22,254			
Bosnia Herzegovina ³	69				3,359			
Belgium.....	390	388	366	419	107,021	103,931	82,913	93,329
Bulgaria.....	18	12	15	19	2 454	739	4 932	1,650
Czechoslovakia.....		5 898	1,494	1,517		4 84,093	150,799	136,429
Denmark.....	145	237	228	208	32,440	53,087	45,316	
Finland.....	184	204	208	198	20,975	17,718	17,865	18,245
France.....	6 3,841	3,299	3,770	3,807	6 489,377	312,712	427,610	323,527
Germany.....	165,260	5,359	6,078	6,627	1 681,959	789,210	1,037,954	985,231
Hungary proper.....	3 1,521		626	656	3 180,103		75,968	45,502
Italy.....	658	763	744	741	60,813	50,959	52,261	55,116
Yugo-Slavia.....			349				33,452	2 31,906
Luxemburg.....	36	33	33	33	6,439	6,505	5,284	2,756
Malta.....	4				672		551	
Netherlands.....	414	445	427	430	110,123	105,318	91,304	84,768
Norway.....	102	132	130	130	24,821	37,912	31,076	27,305
Rumania ⁷	28	142	240	402	3 3,631	10,443	10 3,226	
Do. II.....	58	38			1 144	401		
Russia proper ⁸	8,302				862,798			
Poland.....	2 2,628	11 2,846	4,062	4,777	3 373,917	338,215	644,920	507,083
Northern Caucasus ⁸	197				15,663			
Serbia ⁸	30				2,201			
Spain.....	687	805	841	789	93,413	101,020	107,834	102,225
Sweden.....	379	417	367	363	60,327	77,574	61,655	62,300
Switzerland.....	186	136	123	113	40,537	27,925	28,256	25,373

¹ Five-year average, except in a few cases where statistics were unavailable.

² Unofficial.

³ Old boundaries.

⁴ Average 1915-1916.

⁵ Bohemia, Moravia, and Silesia.

⁶ Alsace-Lorraine included with Germany.

⁷ Grown alone.

⁸ Former Kingdom, Bessarabia and Bukovina.

⁹ Former Kingdom, Bessarabia, Bukovina, and Transylvania.

¹⁰ Bessarabia only.

¹¹ Grown with corn.

¹² Former Russian Poland, Western Galicia, and Posen.

POTATOES—Continued.

TABLE 114.—Potatoes: Area and production in undermentioned countries, 1909–1921—Continued.

Country.	Area.				Production.			
	Average, 1909–1913.	1919	1920	1921	Average, 1909–1913.	1919	1920	1921
EUROPE—continued.								
United Kingdom:	1,000 acres.	1,000 acres.	1,000 acres.	1,000 acres.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.
England.....	408	446	517	532	94,487	95,984	113,979	104,981
Scotland.....	145	155	162	154	34,674	31,061	46,181	3,827
Wales.....	26	29	28	26	5,403	6,048	3,659	5,451
Ireland.....	590	589	584	568	119,874	102,555	74,141	95,427
Total United Kingdom..	1,169	1,219	1,291	1,280	254,438	235,648	237,960	244,686
Total Europe.....	32,594				4,905,397			
ASIA.								
Japan.....	174	344	334		24,738	67,236	47,278	
Russia (Asiatic).....	399				33,151			
Total Asia.....	573				57,889			
AFRICA.								
Algeria.....	45	44	42	40	1,783		985	653
Union South Africa.....	62				3,269	13 3,669	13 3,668	13 3,367
Total Africa.....	107				5,052			
AUSTRALASIA.								
Australia:								
Queensland.....	8	6	4		524	414	293	
New South Wales.....	39	21	20		3,378	1,133	1,867	
Victoria.....	55	52	51		5,983	5,135	5,446	
South Australia.....	8	3	3		894	498	412	
Western Australia.....	3	4	4		309	437	494	
Tasmania.....	24	25	29		2,989	2,110	2,472	
Total Australia.....	137	111	114		14,077	9,722	10,984	
New Zealand.....	28	19	25	22	6,047	3,938	5,402	
Total Australasia.....	165	130	139		20,124	13,660	16,386	
Grand total.....	37,895				5,474,245			

¹³ Including quantities enumerated in Native Locations, Reserves, etc., in 1918.

TABLE 115.—Potatoes: World production so far as reported, 1900–1921.

Year.	Production.	Year.	Production.	Year.	Production.	Year.	Production.
	<i>Bushels.</i>		<i>Bushels.</i>		<i>Bushels.</i>		<i>Bushels.</i>
1900.....	4,382,031,000	1906.....	4,789,112,000	1912.....	5,872,953,000	1918.....	2,744,444,000
1901.....	4,669,958,000	1907.....	5,122,078,000	1913.....	5,802,910,000	1919.....	2,963,720,000
1902.....	4,674,000,000	1908.....	5,295,043,000	1914.....	5,016,291,000	1920.....	2,815,826,000
1903.....	4,409,793,000	1909.....	5,595,567,000	1915.....	4,848,726,000	1921.....	3,303,480,000
1904.....	4,298,049,000	1910.....	5,242,278,000	1916.....	3,197,224,000		
1905.....	5,254,598,000	1911.....	4,842,109,000	1917.....	3,103,876,000		

POTATOES—Continued.

TABLE 116.—Potatoes: Average yield per acre of undermentioned countries, 1900-1921.

Year.	United States.	Russia (European).	Germany.	Austria.	Hungary proper.	France.	United Kingdom.
Average:	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1900-1909.....	91.4	99.9	200.0	151.1	118.7	133.8	193.8
1910-1919.....	95.3	¹ 107.9	187.9	123.2	¹ 122.2	108.0	217.1
1919.....	91.2	.....	146.4	83.8	.....	94.8	193.3
1920.....	110.3	.....	170.8	84.8	121.4	113.0	184.3
1921.....	90.9	.....	148.9	83.7	69.5	85.0	191.2

¹ 7-year average.² England and Wales.

TABLE 117.—Potatoes: Acreage, production, value, exports, etc., in the United States, 1849-1921.

NOTE.—Figures in *italics* are census returns; figures in roman are estimates of the Department of Agriculture. Estimates of acres are obtained by applying estimated percentages of increase or decrease to the published acreage of the preceding year, except that a revised base is used for applying percentage estimates whenever new census data are available. Acreages have been revised for years 1890-1908 so as to be consistent with the following as well as the preceding census acreage, and total production and farm values are adjusted accordingly.

Year.	Acreage (000 omitted).	Average yield per acre.	Production (000 omitted).	Average farm price per bushel. Dec. 1.	Farm value Dec. 1.	Chicago cash price per bushel, fair to fancy. ¹				Domestic exports fiscal year beginning July 1.	Imports during fiscal year beginning July 1.
						December.		Following May.			
						Low.	High.	Low.	High.		
	<i>Acres.</i>	<i>Bush.</i>	<i>Bushels.</i>	<i>Cents.</i>	<i>Dollars.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1849.....			65,798								
1850.....			111,149								
1856-1875	1,261	93.0	117,266	53.5	62,754					549,755	235,346
1876-1885	1,998	81.2	162,228	50.6	82,085					551,248	2,342,421
1886-1895	2,653	74.4	197,285	47.1	92,908	46	56	49	72	551,736	2,841,614
1896....	2,975	91.4	271,769	29.0	78,783	18	26	19	26	926,646	246,178
1897....	2,813	67.9	191,025	54.2	103,442	50	62	60	87	605,187	1,171,378
1898....	2,841	77.0	218,772	41.5	90,897	30	36	33	52	579,833	530,420
1899....	² 3,639	88.6	260,257	39.7	103,365	35	46	27	39	809,472	155,861
1900....	2,987	82.9	247,759	42.3	104,764	40	48	35	60	741,483	371,911
1901....	2,996	66.3	198,626	76.3	151,602	72	82	58	100	528,484	7,656,162
1902....	3,078	95.5	293,918	46.9	137,730	42	48	42	60	843,075	358,505
1903....	3,080	85.1	262,053	60.9	159,620	60	66	95	116	484,042	3,161,581
1904....	3,172	111.1	352,268	44.8	157,646	32	38	20	25	1,163,270	186,199
1905....	3,195	87.3	278,885	61.1	170,340	55	66	48	73	1,000,326	1,948,160
1906....	3,244	102.2	331,685	50.6	167,795	40	43	55	75	1,530,461	176,917
1907....	3,375	95.7	322,954	61.3	197,863	46	58	50	80	1,203,894	403,952
1908....	3,503	86.2	302,000	69.7	210,618	60	77	70	150	763,651	8,383,966
1909....	² 3,669	107.5	394,553	54.2	213,679	20	58	16	34	999,476	353,208
1910 ²	3,720	93.8	349,032	55.7	194,566	30	48	35	75	2,383,887	218,984
1911....	3,619	80.9	292,737	79.9	233,778	70	100	90	200	1,237,276	13,734,695
1912....	3,711	113.4	420,647	50.5	212,550	40	65	33	70	2,028,261	337,230
1913....	3,668	90.4	331,525	68.7	227,903	50	70	60	90	1,794,073	3,645,993
1914....	3,711	110.5	409,921	48.7	199,460	30	66	34	150	3,135,474	270,942
1915....	3,731	96.3	359,721	61.7	221,992	53	95	80	110	4,017,760	209,532
1916....	3,565	80.5	286,953	146.1	419,333	125	190	200	375	2,489,001	3,079,025
1917....	4,384	100.8	442,108	122.8	542,774	93	135	³ 80	³ 250	3,453,307	1,180,480
1918....	4,295	95.9	411,860	119.3	491,527	³ 90	³ 225	³ 125	³ 250	3,688,840	3,634,076
1919 ²	3,542	91.2	322,867	159.5	514,855	³ 280	³ 360	³ 685	³ 925	3,723,434	6,940,930
1920....	3,657	110.3	403,296	114.5	461,778	³ 120	³ 225	³ 40	³ 500	4,803,159	3,423,189
1921....	3,815	90.9	346,823	111.1	385,192	³ 100	³ 245	³ 190	³ 235	.....	.....

¹ Burbank to 1910.² Figures adjusted to census basis.³ Per 100 pounds.

POTATOES—Continued.

TABLE 118.—Potatoes: *acreage, production, and total farm value, by States, 1920-21.*

State.	Thousands of acres.		Production (thousands of bushels).		Total value, basis Dec. 1 price (thousands of dollars).	
	1920	1921 ¹	1920	1921 ¹	1920	1921 ¹
Maine.....	123	129	21,771	37,152	24,214	31,579
New Hampshire.....	15	14	1,995	2,249	2,854	3,024
Vermont.....	27	25	3,510	3,750	4,288	3,890
Massachusetts.....	32	29	4,000	3,335	6,090	5,069
Rhode Island.....	3	3	330	345	523	552
Connecticut.....	24	23	2,760	2,369	4,140	3,554
New York.....	325	330	40,625	33,990	47,938	36,709
New Jersey.....	90	95	14,010	9,075	17,530	12,416
Pennsylvania.....	246	251	28,230	21,586	35,080	28,709
Delaware.....	10	10	1,060	800	1,060	550
Maryland.....	54	49	5,508	3,185	5,233	3,504
Virginia.....	154	136	18,480	14,688	17,536	16,157
West Virginia.....	47	48	5,640	4,030	7,614	6,650
North Carolina.....	46	46	4,180	4,043	5,844	5,789
South Carolina.....	28	30	2,800	2,550	3,040	3,825
Georgia.....	22	23	1,628	1,725	3,386	2,816
Florida.....	23	17	2,415	1,564	4,830	2,072
Ohio.....	116	116	11,600	9,728	15,060	10,123
Indiana.....	68	70	6,528	3,570	8,682	5,176
Illinois.....	122	121	7,930	6,413	11,498	8,978
Michigan.....	345	340	36,225	27,200	33,327	25,840
Wisconsin.....	308	315	33,264	21,120	28,607	20,349
Minnesota.....	319	307	31,581	27,535	25,265	21,772
Iowa.....	96	96	10,560	4,128	12,883	5,779
Missouri.....	80	82	6,560	1,756	9,090	6,421
North Dakota.....	83	120	6,557	11,520	6,126	8,064
South Dakota.....	75	80	7,950	4,400	7,712	4,708
Nebraska.....	85	102	8,415	3,160	10,092	9,792
Kansas.....	60	65	5,100	4,160	7,650	6,616
Kentucky.....	57	58	5,613	3,770	8,464	6,220
Tennessee.....	35	35	2,905	1,520	4,648	3,003
Alabama.....	27	32	1,839	2,400	3,618	4,080
Mississippi.....	16	16	1,362	1,088	2,781	2,176
Louisiana.....	27	27	1,755	1,809	3,503	3,256
Texas.....	36	37	1,872	2,072	4,118	3,937
Oklahoma.....	35	36	2,590	2,088	4,662	3,863
Arkansas.....	31	33	2,418	1,815	4,232	3,267
Montana.....	40	44	4,400	5,060	4,620	4,048
Wyoming.....	15	19	1,875	2,052	2,250	2,421
Colorado.....	73	90	9,400	11,070	7,592	8,081
New Mexico.....	4	4	300	296	620	533
Arizona.....	4	4	280	460	684	614
Utah.....	16	15	3,024	2,415	2,410	2,033
Nevada.....	4	4	540	502	842	710
Idaho.....	45	57	8,100	10,515	5,508	8,120
Washington.....	53	55	8,215	7,425	7,804	7,351
Oregon.....	43	43	5,590	3,370	4,472	4,218
California.....	70	74	9,800	10,064	14,700	13,083
United States.....	3,657	3,815	403,296	346,823	461,778	385,192

¹ Preliminary.

POTATOES—Continued.

TABLE 119.—Potatoes: Condition of crop, United States, on 1st of months named, 1900–1921.

Year.	July.	Aug.	Sept.	Oct.	Year.	July.	Aug.	Sept.	Oct.
	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>		<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
1900.....	91.3	88.2	80.0	74.4	1911.....	76.0	62.3	59.8	62.3
1901.....	87.4	62.3	52.2	54.0	1912.....	83.9	87.8	87.2	85.1
1902.....	92.9	94.8	89.1	82.5	1913.....	86.2	78.0	69.9	67.7
1903.....	88.1	87.2	84.3	74.6	1914.....	83.6	79.0	75.8	78.3
1904.....	93.9	94.1	91.6	89.5	1915.....	91.1	92.0	82.7	74.2
1905.....	91.2	87.2	80.9	74.3	1916.....	87.8	80.8	67.4	62.6
1906.....	91.5	89.0	85.3	82.2	1917.....	90.1	87.9	82.7	79.0
1907.....	90.2	88.5	80.2	77.0	1918.....	87.6	79.9	74.5	73.7
1908.....	89.6	82.9	73.7	68.7	1919.....	87.6	75.1	69.5	67.9
1909.....	93.0	85.8	80.9	78.8	1920.....	89.3	87.0	81.3	82.7
1910.....	86.3	75.8	70.5	71.8	1921.....	83.4	65.8	63.7	61.5

TABLE 120.—Potatoes: Forecasts of production, monthly, with preliminary and final estimates.

[000 omitted.]

Year.	July.	August.	September.	October.	November production estimate.	Final estimate.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1912.....	352,000	371,000	398,000	401,000	414,289	420,647
1913.....	343,000	339,000	325,000	319,000	328,550	331,525
1914.....	360,614	369,634	370,963	333,619	406,288	409,921
1915.....	393,358	430,808	405,909	368,151	359,253	359,721
1916.....	368,810	364,271	318,492	300,563	288,964	286,933
1917.....	451,716	467,289	461,908	452,923	439,686	442,108
1918.....	405,507	390,907	384,529	391,279	390,101	411,860
1919.....	390,748	357,120	340,194	330,076	352,025	322,897
1920.....	387,586	401,903	412,933	414,986	421,252	403,296
Average.....	383,704	387,992	380,770	375,732	377,823	376,544
1921.....	376,997	315,918	322,985	345,844	356,076	¹ 349,823

¹ Preliminary.

POTATOES—Continued.

TABLE 121.—Potatoes: Yield per acre, price per bushel December 1, and value per acre, by States.

State	Yield per acre (bushels).					Farm price per bushel (cents).															Value per acre (dollars). ¹	
	5-year average, 1917-1921.	1917	1918	1919	1920	10-year average, 1912-1921.	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	5-year average, 1916-1920.	1921				
Me....	204	125	200	230	177	288	95	55	53	33	70	142	130	120	140	125	85	247.09	244.80			
N. H....	127	107	140	102	127	160	124	61	83	60	95	166	167	145	175	155	135	191.25	216.00			
Vt....	122	100	130	100	130	150	106	55	72	47	81	139	140	138	157	125	104	153.92	156.00			
Mass....	116	115	133	90	125	115	134	75	85	71	94	175	175	170	190	150	152	189.02	174.80			
R. I....	118	135	130	100	110	115	136	77	90	70	92	185	175	173	180	160	160	190.81	184.00			
Conn....	100	110	95	75	115	103	132	78	87	65	96	175	164	165	195	150	150	164.43	154.50			
N. Y....	106	95	98	109	125	103	104	58	80	44	82	158	130	122	145	118	108	131.84	111.24			
N. J....	111	114	92	96	156	95	119	66	82	61	75	155	141	170	169	125	142	172.70	134.90			
Pa....	95	92	80	100	115	86	112	57	80	58	75	148	135	151	154	124	133	129.04	114.38			
Del....	84	93	87	83	106	50	102	70	75	70	75	125	130	140	125	100	110	113.51	55.00			
Md....	88	100	80	94	102	65	95	58	67	60	62	133	119	120	130	95	110	112.09	71.50			
Va....	107	99	94	114	120	108	103	65	80	77	61	137	125	120	157	95	110	141.53	118.80			
W. Va....	99	115	87	90	120	85	122	62	90	81	65	158	132	160	175	135	163	149.91	133.55			
N. C....	89	90	95	80	91	88	119	76	82	92	73	140	143	135	163	142	145	120.91	125.84			
S. C....	94	96	102	85	100	85	159	112	130	125	115	175	210	193	200	180	150	175.91	127.50			
Ga....	75	84	70	70	74	75	154	87	105	105	99	175	195	185	217	208	165	140.82	123.75			
Fla....	93	91	100	76	105	92	166	110	117	113	115	200	205	200	210	290	190	180.83	174.80			
Ohio....	78	100	69	61	100	58	122	53	85	53	70	182	143	150	192	135	155	116.10	89.90			
Ind....	73	92	80	44	96	51	117	50	84	56	56	177	139	135	195	133	145	105.45	73.95			
Ill....	66	90	72	52	65	53	123	60	89	61	59	179	152	148	196	145	140	108.67	74.20			
Mich....	91	95	84	90	105	80	86	41	53	30	56	160	105	89	135	92	95	93.88	76.00			
Wis....	99	114	110	94	108	68	80	34	54	30	45	147	90	80	140	86	95	96.83	64.60			
Minn....	96	112	105	87	99	75	77	28	52	32	39	130	91	75	153	80	90	91.20	67.50			
Iowa....	73	95	72	46	110	43	113	46	82	59	54	175	131	133	192	122	140	103.25	60.20			
Mo....	73	87	61	75	82	58	124	69	93	73	60	180	137	153	181	151	135	116.47	78.30			
N. D....	76	43	99	63	79	96	81	28	56	42	41	115	130	73	160	98	70	82.67	67.20			
S. D....	78	90	91	50	106	55	92	36	63	47	35	137	111	93	190	97	107	94.55	58.85			
Nebr....	81	85	86	55	99	80	103	51	78	54	42	150	107	118	190	120	120	105.05	96.00			
Kans....	67	57	53	76	85	64	125	73	91	77	74	165	152	144	190	150	135	110.40	86.40			
Ky....	81	96	75	70	92	65	128	67	102	84	55	142	140	165	210	150	165	134.59	107.25			
Tenn....	73	94	70	67	83	52	126	70	97	91	63	149	126	165	172	160	165	120.83	85.80			
Ala....	75	72	80	80	67	75	150	90	105	101	90	169	182	181	215	200	170	146.79	127.50			
Miss....	80	78	80	85	87	68	145	90	100	95	84	160	168	165	185	200	200	139.66	136.00			
La....	68	64	79	64	65	67	148	83	96	97	95	167	184	190	220	203	180	123.51	120.60			
Tex....	59	60	55	73	52	50	165	105	112	104	105	190	210	200	210	220	190	119.74	106.40			
Okla....	62	69	34	75	74	58	151	93	105	90	84	195	180	195	205	180	185	116.16	107.30			
Ark....	67	80	50	73	78	55	146	92	100	97	76	190	157	184	205	175	180	125.45	99.00			
Mont....	103	95	135	60	110	115	87	40	67	64	50	120	102	80	160	105	80	113.28	92.00			
Wyo....	124	155	150	80	125	108	100	60	65	70	60	128	104	85	190	120	118	151.42	127.44			
Colo....	138	160	160	115	130	123	86	41	65	50	55	135	91	99	170	80	73	157.96	89.79			
N. Mex....	85	116	100	58	75	74	148	65	140	95	95	175	165	160	190	210	180	159.52	133.20			
Ariz....	93	105	85	70	90	115	154	125	135	120	100	180	150	203	195	180	140	169.25	161.00			
Utah....	171	189	180	136	189	161	84	49	58	60	63	130	78	97	137	80	85	178.71	136.85			
Nev....	159	207	171	135	135	148	107	60	68	70	70	130	120	123	150	156	120	223.77	177.60			
Idaho....	172	156	185	155	180	185	77	29	50	48	56	127	79	81	151	68	77	164.01	142.45			
Wash....	134	125	132	125	155	135	83	36	60	55	53	98	92	101	145	95	99	147.70	133.65			
Oreg....	106	108	110	94	130	90	82	31	53	60	60	90	80	100	150	80	109	115.28	98.10			
Calif....	139	145	143	130	140	136	114	65	70	70	75	140	150	120	171	150	130	203.76	176.80			
U. S....	97.8	100.8	95.9	91.2	110.3	90.9	100.3	50.5	63.7	48.7	61.7	146.1	122.8	119.3	159.5	114.5	111.1	125.50	100.97			

¹ Based upon farm price Dec. 1.

POTATOES—Continued.

TABLE 122.—Potatoes: Farm price, cents per bushel on 1st of each month, 1908–1921.

Year.	Jan. 1.	Feb. 1.	Mar. 1.	Apr. 1.	May 1.	June 1.	July 1.	Aug. 1.	Sept. 1.	Oct. 1.	Nov. 1.	Dec. 1.	Yearly aver.
1908.....	63.4	66.0	69.0	70.4	73.3	71.3	77.8	83.6	78.0	74.8	69.2	70.6	72.1
1909.....	72.0	73.3	80.0	86.3	97.3	97.7	91.0	85.1	71.5	64.3	57.8	54.1	70.8
1910.....	56.0	56.2	54.6	47.4	38.4	37.4	40.1	64.9	72.9	67.8	55.7	55.7	56.4
1911.....	54.1	55.1	55.3	55.5	62.5	63.3	96.3	136.0	113.7	88.3	76.3	79.9	80.6
1912.....	84.5	94.4	102.0	117.1	127.3	119.7	103.6	86.5	65.0	51.1	45.5	50.5	72.5
1913.....	50.6	53.1	52.0	50.3	48.2	55.2	49.8	69.2	75.3	73.9	69.6	68.7	64.3
1914.....	68.4	69.7	70.7	70.0	71.4	71.3	81.5	87.1	74.9	64.7	52.8	48.7	64.4
1915.....	49.7	50.4	50.4	47.8	50.5	50.8	52.1	56.3	50.5	48.8	60.8	61.7	54.4
1916.....	70.6	88.0	94.4	97.6	94.8	98.8	102.3	95.4	109.3	112.0	135.7	146.1	114.1
1917.....	147.3	172.4	240.7	234.7	279.6	274.0	247.9	170.8	139.1	122.1	127.8	122.8	164.9
1918.....	121.0	122.9	120.3	92.6	80.1	75.5	94.9	141.6	148.8	143.6	127.2	119.3	121.8
1919.....	116.1	114.4	109.4	105.4	118.9	121.4	128.4	192.8	187.5	161.2	152.8	159.5	148.2
1920.....	178.6	217.6	243.5	295.6	393.6	421.3	386.0	302.9	184.9	134.8	118.3	114.5	202.2
1921.....	105.6	95.6	84.0	77.8	68.0	67.1	69.9	136.9	168.6	137.6	123.5	111.1	114.2
Average 1912–1921.....	99.2	107.8	116.7	118.9	133.2	135.5	131.6	134.0	120.4	105.3	101.4	100.3	112.1

TABLE 123.—Potatoes: Extent and causes of yearly losses, 1909–1920.

Year.	Deficient mois- ture.	Excessive mois- ture.	Floods.	Frost or freeze.	Hail.	Hot winds.	Storms.	Total climatic.	Plant disease.	Insect pests.	Animal pests.	Defective seed.	Total.
1920.....	P. ct. 6.7	P. ct. 2.2	P. ct. 0.3	P. ct. 0.6	P. ct. 0.2	P. ct. 0.2	(¹)	P. ct. 10.2	P. ct. 8.1	P. ct. 2.8	P. ct. 0.1	P. ct. 0.2	P. ct. 21.8
1919.....	16.3	5.0	.4	.7	.1	.7	0.1	23.6	8.8	4.7	(¹)	.3	38.1
1918.....	14.7	1.0	.2	1.5	.1	.6	(¹)	18.4	5.3	3.3	(¹)	.2	28.3
1917.....	8.8	3.5	.2	3.0	.2	.3	(¹)	16.3	4.1	2.4	(¹)	.1	23.8
1916.....	19.7	6.5	.4	1.9	.2	1.4	.1	31.5	5.6	4.5	(¹)	.2	43.6
1915.....	2.2	8.7	.5	2.2	.1	.1	(¹)	14.0	13.0	2.4	(¹)	.1	30.4
1914.....	10.2	2.1	.1	.8	.1	.4	(¹)	14.0	1.7	3.3	(¹)	.3	21.2
1913.....	20.8	1.6	.2	2.0	.1	.7	(¹)	26.0	1.7	3.9	.1	.5	34.5
1912.....	5.3	3.3	(¹)	.6	.1	.2	.1	10.5	5.8	3.9	.2	.3	21.7
1911.....	25.8	2.0	(¹)	1.9	.1	3.2	(¹)	33.5	2.7	2.6	.1	.6	42.4
1910.....	15.4	1.7	.2	1.1	.1	.3	(¹)	19.2	3.9	5.0	.1	.4	29.8
1909.....	11.3	2.8	.3	1.8	.2	.2	(¹)	16.7	1.7	1.7	.1	.2	21.3
Average.....	13.4	3.4	.3	1.5	.1	.7	(¹)	19.5	5.2	3.4	.1	.2	29.7

¹ Less than 0.05 per cent.

POTATOES—Continued.

TABLE 124.—Potatoes: Stocks on January 1.

State and year.	Total production, bushels (000 omitted).	Stocks Jan. 1.				Price, cents per bushel.	
		Per cent of crop.	Bushels (000 omitted).	Per cent of stock held by—		Dec. 1.	Mar. 1.
				Grow- ers.	Deal- ers.		
Total United States:							
1915-16.....	359,721	42.4	152,554	.....	.....	61.7	94.4
1916-17.....	286,953	32.3	92,308	.....	.....	145.1	240.7
1917-18.....	442,108	46.2	204,314	84.8	15.2	122.8	120.3
1918-19.....	411,860	42.5	174,973	82.6	17.4	119.3	109.4
1919-20.....	322,867	35.8	115,714	76.9	23.1	159.5	243.5
1920-21.....	403,296	33.6	135,603	85.3	14.7	114.5	84.0
1921-22.....	346,823	40.7	141,042	77.6	22.4	111.1	.....
Total (21 Northern States):							
1915-16.....	254,235	43.6	110,810	79.5	20.5	60	93
1916-17.....	183,281	33.1	60,603	74.9	25.1	152	252
1917-18.....	303,899	49.6	150,666	84.6	15.4	122	116
1918-19.....	281,060	43.5	122,261	82.4	17.6	115	102
1919-20.....	230,025	36.4	83,729	79.5	20.5	157	236
1920-21.....	389,501	34.7	100,457	86.3	13.7	113	94
1921-22.....	243,772	42.8	104,229	74.0	26.0	107	.....
Total (11 Far West States):							
1915-16.....	48,776	53.9	26,312	80.6	19.4	61	104
1916-17.....	54,081	44.6	24,140	71.0	29.0	120	238
1917-18.....	70,779	46.3	32,748	86.8	13.2	105	88
1918-19.....	66,630	48.0	31,982	85.3	14.7	101	89
1919-20.....	41,369	43.1	17,830	71.6	28.4	162	266
1920-21.....	51,694	41.8	21,608	82.6	17.4	104	84
1921-22.....	53,849	48.3	26,028	82.0	18.0	95	.....
Total (16 Southern States):							
1915-16.....	56,710	27.2	15,432	82.1	17.9	70	88
1916-17.....	49,591	16.3	8,065	68.8	31.2	151	204
1917-18.....	67,430	31.0	20,900	82.8	17.2	147	171
1918-19.....	64,170	32.3	20,730	79.5	20.5	157	161
1919-20.....	51,473	27.5	14,155	69.1	30.9	181	262
1920-21.....	62,101	21.8	13,538	82.1	17.9	146	155
1921-22.....	49,202	21.9	10,785	80.5	19.5	147	.....
Maine:							
1920-21.....	21,771	55.0	11,971	88.0	12.0	125	55
1921-22.....	37,152	55.0	20,434	80.7	19.3	85	.....
New York:							
1920-21.....	40,625	47.0	19,094	91.0	9.0	118	63
1921-22.....	33,990	42.7	14,514	91.5	8.5	103	.....
Pennsylvania:							
1920-21.....	28,290	33.0	9,336	.....	.....	124	78
1921-22.....	21,586	33.6	7,253	81.0	19.0	133	.....
Ohio:							
1920-21.....	11,600	21.0	2,436	86.0	14.0	135	106
1921-22.....	6,728	30.9	2,079	80.5	19.5	155	.....
Indiana:							
1920-21.....	6,528	12.0	783	72.0	28.0	133	99
1921-22.....	3,570	32.7	1,167	63.3	31.7	145	.....
Illinois:							
1920-21.....	7,930	12.0	952	75.0	25.0	145	117
1921-22.....	6,413	36.2	2,322	76.3	23.7	140	.....
Michigan:							
1920-21.....	36,225	45.0	16,301	83.0	17.0	92	52
1921-22.....	27,200	47.1	12,811	81.0	19.0	95	.....
Wisconsin:							
1920-21.....	33,264	48.0	15,967	88.0	12.0	86	62
1921-22.....	21,420	64.2	13,732	74.0	26.0	95	.....
Minnesota:							
1920-21.....	31,581	37.0	11,685	80.0	20.0	80	54
1921-22.....	27,525	42.5	11,698	73.4	26.6	90	.....
North Dakota:							
1920-21.....	6,557	20.0	1,311	62.0	38.0	98	91
1921-22.....	11,520	25.2	2,903	63.2	36.8	70	.....
Nebraska:							
1920-21.....	8,415	28.0	2,356	85.0	15.0	120	106
1921-22.....	8,160	44.0	3,590	73.0	27.0	120	.....
Kentucky:							
1920-21.....	5,643	29.0	1,636	66.0	34.0	150	120
1921-22.....	3,770	43.3	1,632	100.0	0.0	165	.....
Colorado:							
1920-21.....	9,490	41.0	3,891	92.0	8.0	80	53
1921-22.....	11,070	58.9	6,520	90.3	9.7	73	.....

POTATOES—Continued.

TABLE 125.—Potatoes: Wholesale price, 1913-1921.

Date.	New York State and western (per 150 pounds).			Chicago, fair to fancy (per 100 pounds).			Minneapolis (per 100 pounds).			St. Louis, Burbank (per 100 pounds).			Cincinnati (per 150 pounds).			Denver (per 150 pounds).			San Francisco (per 100 pounds).		
	Low.	High.	Aver.	Low.	High.	Aver.	Low.	High.	Aver.	Low.	High.	Aver.	Low.	High.	Aver.	Low.	High.	Aver.	Low.	High.	Aver.
1921.																					
January.....	\$3.00	\$4.25	\$3.47	\$1.00	\$1.90	\$1.31	\$1.60	\$1.80	\$1.76	\$1.05	\$2.25	\$1.63	\$2.00	\$3.00	\$2.74	\$1.30	\$2.00	\$1.71	\$1.00	\$2.25	\$1.69
February.....	2.00	3.50	2.74	.95	1.40	1.18	1.15	1.50	1.32	.75	2.25	1.49	2.35	2.50	2.42	1.00	1.75	1.49	1.25	2.10	1.70
March.....	2.00	3.25	2.63	.95	2.40	1.33	1.20	1.20	1.20	1.15	2.75	1.70	2.00	2.30	2.34	1.25	1.75	1.49	1.25	1.60	1.56
April.....	1.50	3.25	2.65	.70	2.40	1.14	1.00	1.00	1.10	1.05	2.00	2.72	1.75	2.25	2.30	1.25	1.75	1.49	1.25	1.60	2.71
May.....	1.50	2.50	2.00	.40	5.00	2.47	1.00	8.00	4.00	.85	3.75	2.22	1.75	2.00	1.87	1.50	2.25	1.69	1.25	2.25	1.78
June.....	1.00	2.25	1.78	.50	4.00	1.73	.75	5.00	3.75	1.00	3.75	2.12	1.75	2.00	1.88	1.50	2.25	2.43	1.25	2.25	1.86
July.....	.....	.....	.....	.....	3.25	1.84	.....	3.75	1.64	1.25	3.65	1.70	1.75	5.00	3.18	1.50	3.50	2.71	1.25	2.25	1.86
August.....	2.50	5.00	4.24	1.25	4.00	2.74	3.75	4.50	3.21	1.25	3.65	2.42	3.50	5.00	4.15	1.50	3.50	2.41	1.25	2.25	1.88
September.....	3.00	4.75	4.24	1.25	3.40	2.27	2.75	4.00	3.21	1.00	3.30	2.58	2.00	5.00	4.10	1.50	3.50	2.41	1.25	2.25	1.88
October.....	3.00	4.75	4.24	1.25	4.00	2.74	2.75	3.25	2.41	1.15	2.90	2.15	2.00	4.00	2.86	1.50	3.50	2.07	1.25	2.25	1.88
November.....	3.40	5.25	3.84	1.00	2.60	1.70	1.00	3.25	1.72	1.10	2.55	1.71	1.50	3.75	2.73	1.50	3.50	2.07	1.25	2.25	1.88
December.....	3.25	5.50	4.39	1.00	2.45	1.72	1.00	1.65	1.72	1.25	2.35	1.85	1.50	3.75	2.45	1.50	3.50	1.68	1.25	2.25	1.88
.....	1.00	5.50	3.13	.40	5.00	1.85	.50	10.00	2.18	.75	7.00	2.02	1.50	5.50	2.76	1.00	3.50	1.93	1.00	7.00	1.99
1920.....	.....	.....	.....	1.20	12.00	4.64	1.60	12.00	4.65	1.00	14.00	.....	2.00	13.00	7.06	1.50	13.00	.....	1.00	10.40	4.10
1919.....	1.00	7.25	3.84	.85	5.50	2.39	1.40	4.50	2.36	1.25	4.50	.....	1.25	7.50	4.64	1.40	7.00	.....	1.30	4.25	2.15
1918.....	1.00	3.33	2.08	.45	3.50	1.85	.80	3.25	1.86	.80	2.85	.....	1.25	7.50	4.64	.75	3.65	.....	1.00	2.75	.....
.....	.....	.....	.....	.....	Per bushel,	.....	.....	Per bushel,	.....	.....	.....	.....	.....	Per bushel,	.....	.....	.....	.....	.....	.....	.....
1917.....	3.00	11.00	.....	.90	4.30	.....	.90	4.20	.....	.87	3.35	.....	1.10	3.40	.....	2.00	6.50	.....	1.25	5.00	.....
1916.....	2.85	5.25	.....	.60	2.00	.....	.62	1.75	.....	.50	2.10	.....	.65	.90	.....	1.40	5.00	.....	.90	2.50	.....
1915.....	1.00	3.00	.....	.17	1.50	.....	.25	1.00	.....	.22	.96	.....	.30	.90	.....	.85	2.25	.....	.85	3.50	.....
1914.....	1.25	3.00	.....	.28	1.75	.....	.28	1.50	.....	.23	1.60	.....	.45	1.70	.....	.70	2.75	.....	.60	1.65	.....
1913.....	1.70	2.87	.....	.15	.82	.....	.33	1.00	.....	.30	.93	.....	.30	1.00	.....	.60	4.00	.....	.20	1.65	.....

POTATOES—Continued.

TABLE 126.—Potatoes: International trade, calendar years 1911-1920.

GENERAL NOTE.—Substantially the international trade of the world. It should not be expected that the world export and import totals for any year will agree. Among sources of disagreement are these: (1) Different periods of time covered in the "year" of the various countries; (2) imports received in year subsequent to year of export; (3) want of uniformity in classification of goods among countries; (4) different practices and varying degrees of failure in recording countries of origin and ultimate destination; (5) different practices of recording reexported goods; (6) opposite methods of treating free ports; (7) clerical errors, which, it may be assumed, are not infrequent.

The exports given are domestic exports, and the imports given are imports for consumption as far as it is feasible and consistent so to express the facts. While there are some inevitable omissions, on the other hand there are some duplications because of reshipments that do not appear as such in official reports. For the United Kingdom, import figures refer to imports for consumption, when available, otherwise total imports, less exports, of "foreign and colonial merchandise." Figures for the United States include Alaska, Porto Rico, and Hawaii.

Country.	Average, 1911-1913.		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORTING COUNTRIES.								
	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>	<i>1,000 bushels.</i>
Belgium.....	4,921	8,692	.....	136	3,833	1,514	2,371	.....
Canada.....	525	1,207	728	2,126	616	6,151	923	5,583
China.....	36	288	.....	128	.....	205	.....	192
Denmark.....	40	928	(¹)	1,703	(¹)	4,610	30	7,954
France.....	7,143	8,683	1,153	630	11,691	1,327	2,465	7,903
Italy.....	242	3,975	(¹)	118	30	505	1	3,074
Japan.....	.....	410	.....	326	.....	370	.....	328
Netherlands.....	1,952	16,451	1	465	108	13,549	44	14,424
Portugal.....	273	500	20	16	578	18	.....	.....
Russia.....	309	7,762	.....	.....	.....	.....	.....	.....
Spain.....	.....	1,835	.....	631	.....	275	.....	326
PRINCIPAL IMPORTING COUNTRIES.								
Algeria.....	1,218	931	373	4	539	289	1,630	472
Argentina.....	1,337	513	35	572	81	1,024	.....	.....
Austria-Hungary.....	4,070	1,451	.....	.....	.....	.....	.....	.....
Brazil.....	939	(¹)	16	191	43	14	276	(¹)
Cuba.....	2,001	2	3,378	.....	3,266	.....	.....	.....
Egypt.....	599	28	5	(¹)	163	1	786	(¹)
Finland.....	479	15	264	.....	1,237	.....	172	.....
Germany.....	29,180	12,412	.....	.....	.....	.....	26,852	2,109
Norway.....	215	60	412	(¹)	245	46	96	568
Philippine Islands.....	334	.....	239	.....	289	.....	291	.....
Sweden.....	700	64	1,256	(¹)	732	623	204	.....
Switzerland.....	3,172	42	140	2	94	774	456	584
United Kingdom.....	11,382	6,246	1,896	2,532	1,846	13,276	9,719	690
United States.....	5,707	1,814	1,201	3,853	5,544	3,612	6,062	4,154
Other countries.....	1,993	782	1,476	4,938	468	494	1,176	374
Total.....	78,767	75,151	12,593	18,268	27,706	51,026	52,697	51,106

¹ Less than 500 bushels.² One year average.

TABLE 127.—Potatoes: Monthly average jobbing prices per 100 pounds at 10 markets, 1921.

Market.	Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	Aug- ust.	Sep- tem- ber.	Octo- ber.	Nov- em- ber.	De- cem- ber.
New York.....	\$1.80	\$1.31	\$1.51	\$1.41	\$4.18	\$1.90	\$2.23	\$2.90	\$2.11	\$2.09	\$1.92	\$2.07
Chicago.....	¹ 1.29	¹ 1.15	¹ 1.25	4.83	4.50	¹ 2.42	¹ 2.33	¹ 3.11	¹ 2.65	¹ 2.00	¹ 1.75	¹ 1.83
Philadelphia.....	1.65	1.20	1.07	3.96	4.14	1.93	2.11	3.07	2.41	2.19	2.01	2.00
Pittsburgh.....	1.60	1.36	1.48	4.50	4.37	2.28	2.73	3.43	2.71	2.30	2.10	2.01
St. Louis.....	1.53	1.39	1.48	5.76	3.49	2.77	2.84	3.16	2.83	2.28	1.89	1.93
Cincinnati.....	1.68	1.58	1.77	4.12	4.10	2.49	2.65	3.52	2.96	2.46	1.93	1.97
St. Paul.....	.....	.....	.....	.....	.....	3.06	3.05	3.49	.....	.....	.....	.....
Minneapolis.....	.....	.....	.....	.....	.....	3.05	2.90	3.43	.....	.....	.....	.....
Kansas City.....	.....	.....	.....	6.36	3.93	3.06	.....	3.09	2.63	¹ 1.97	¹ 1.51	¹ 1.65
Washington ²	2.12	1.69	1.71	4.73	4.32	2.11	2.39	3.27	2.83	2.61	2.43	2.28

¹ Carlot sales.² Sales direct to retailers.

POTATOES—Continued.

TABLE 128.—Potatoes: Carlot shipments, by States of origin, for 1917-1921.

State.	1917	1918	1919	1920	1921
Maine.....	20,084	16,048	22,601	18,851	26,268
New York, Long Island.....	3,582	4,953	3,902	4,724	5,538
New York, Other.....	2,874	5,661	7,511	8,100	15,476
New Jersey.....	11,402	6,113	10,484	17,017	10,527
Pennsylvania.....	2,676	2,691	3,538	5,038	5,033
Maryland.....	2,538	1,144	1,996	3,024	2,742
Virginia.....	20,440	11,942	12,399	16,210	19,678
North Carolina.....	4,709	5,568	3,346	3,506	3,587
South Carolina.....	2,440	2,812	1,217	3,069	2,501
Florida.....	4,284	4,846	2,278	3,351	2,342
Michigan.....	5,187	10,271	13,062	13,590	16,556
Wisconsin.....	10,283	18,453	23,886	14,949	15,215
Minnesota.....	12,667	21,920	24,347	21,605	25,902
Iowa.....	440	934	(¹)	894	131
North Dakota.....	(¹)	1,628	2,917	1,595	9,129
South Dakota.....	966	1,223	757	1,847	3,297
Nebraska.....	1,520	3,163	2,534	2,510	4,516
Kansas.....	837	824	1,133	1,974	2,389
Kentucky.....	717	691	963	938	840
Alabama.....	633	586	(¹)	(¹)	695
Louisiana.....	1,063	4,045	553	892	1,160
Texas.....	1,689	2,317	806	734	1,109
Oklahoma.....	663	(¹)	678	583	285
Arkansas.....	339	(¹)	(¹)	223	129
Montana.....	(¹)	(¹)	828	635	1,446
Wyoming.....	(¹)	(¹)	401	470	774
Colorado.....	9,791	14,145	12,765	9,434	12,902
Utah.....	667	567	476	509	1,121
Nevada.....	1,158	815	875	414	483
Idaho.....	5,830	7,616	8,859	6,854	10,756
Washington.....	2,762	2,257	4,095	3,260	4,798
Oregon.....	3,436	1,816	1,276	1,136	1,720
California.....	6,570	10,933	9,081	9,588	8,805
All other.....	2,409	3,292	1,713	1,611	1,454
Total.....	144,656	169,264	181,277	179,149	219,394

¹ Included in all other.

SWEET POTATOES.

TABLE 129.—Sweet potatoes: Acreage, production, and value in the United States, 1849-1921.

[See note for Table 117.]

Year.	Acreage (000 omitted).	Average yield per acre	Production (000 omitted).	Average farm price per bushel Dec. 1.	Farm value Dec. 1 (000 omitted).	Year.	Acreage (000 omitted).	Average yield per acre.	Production (000 omitted).	Average farm price per bushel Dec. 1.	Farm value Dec. 1 (000 omitted).
	<i>Acres.</i>	<i>Bushels.</i>	<i>Bushels</i>	<i>Cents.</i>	<i>Dollars.</i>		<i>Acres.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Cents.</i>	<i>Dollars.</i>
1849.....	599	92.4	55,352	66.1	36,564	1908....	599	92.4	55,352	66.1	36,564
1859.....	641	90.1	57,764	68.5	39,585	1909....	641	90.1	57,764	68.5	39,585
1869.....	641	93.5	59,938	67.1	40,216	1910....	641	93.5	59,938	67.1	40,216
1879.....	605	90.1	54,538	75.5	41,202	1911....	605	90.1	54,538	75.5	41,202
1889.....	583	95.2	55,479	72.6	40,264	1912....	583	95.2	55,479	72.6	40,264
1899.....	625	94.5	59,057	72.6	42,884	1913....	625	94.5	59,057	72.6	42,884
1900.....	603	93.8	56,574	73.0	41,294	1914....	603	93.8	56,574	73.0	41,294
1901.....	731	103.5	75,639	62.1	46,980	1915....	731	103.5	75,639	62.1	46,980
1902.....	774	91.7	70,955	84.8	60,141	1916....	774	91.7	70,955	84.8	60,141
1903.....	919	91.2	83,822	110.8	92,916	1917....	919	91.2	83,822	110.8	92,916
1904.....	940	93.5	87,924	135.2	118,863	1918....	940	93.5	87,924	135.2	118,863
1905.....	941	103.2	97,126	134.4	130,514	1919....	941	103.2	97,126	134.4	130,514
1906.....	992	104.8	103,925	113.4	117,834	1920....	992	104.8	103,925	113.4	117,834
1907.....	1,066	92.6	98,660	88.1	86,910	1921....	1,066	92.6	98,660	88.1	86,910

SWEET POTATOES—Continued.

TABLE 130.—Sweet potatoes: Acreage, production, and total farm value, by States, 1920 and 1921.

State.	Thousands of acres.		Production (thousands of bushels).		Total value, basis Dec. 1 price (thousands of dollars).	
	1920	1921	1920	1921	1920	1921
New Jersey.....	16	17	2,288	1,870	3,546	3,179
Pennsylvania.....	2	2	276	248	428	448
Delaware.....	9	9	1,132	900	1,152	980
Maryland.....	9	9	1,134	900	1,304	1,260
Virginia.....	42	44	5,334	4,180	5,067	5,225
West Virginia.....	3	3	337	345	536	621
North Carolina.....	99	102	10,296	10,302	11,737	9,993
South Carolina.....	76	83	7,980	7,885	9,337	7,096
Georgia.....	132	146	12,270	12,410	11,903	7,313
Florida.....	30	32	2,850	2,720	3,420	2,611
Ohio.....	3	3	309	321	511	571
Indiana.....	3	3	360	396	576	594
Illinois.....	9	9	873	990	1,179	891
Iowa.....	4	3	416	312	1,023	546
Missouri.....	13	14	1,430	1,400	2,216	1,400
Kansas.....	4	4	540	500	861	575
Kentucky.....	18	18	1,890	1,872	2,835	2,153
Tennessee.....	42	44	1,284	4,400	5,260	4,180
Alabama.....	118	135	11,416	12,150	11,146	8,870
Mississippi.....	103	107	11,340	8,560	11,896	6,334
Louisiana.....	80	85	8,080	8,272	7,514	5,377
Texas.....	95	100	9,975	8,200	12,968	6,970
Oklahoma.....	23	27	2,645	2,646	3,491	2,805
Arkansas.....	49	54	5,145	5,670	5,402	4,649
New Mexico.....	1	1	118	126	260	328
Arizona.....	1	1	125	125	283	223
California.....	8	8	1,016	960	1,625	1,200
United States.....	992	1,066	103,925	98,660	117,834	86,910

TABLE 131.—Sweet potatoes: Condition of crop, United States, on 1st of months named, 1901-1921.

Year.	July	Aug.	Sept.	Oct.	Year.	July.	Aug.	Sept.	Oct.	Year.	July.	Aug.	Sept.	Oct.
	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>		<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>		<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
1901....	93.1	80.7	78.7	79.0	1908....	89.8	88.8	88.7	85.5	1915....	88.7	85.5	87.5	85.0
1902....	83.6	78.3	77.2	79.7	1909....	89.7	86.9	81.3	77.8	1916....	90.4	85.9	82.7	79.2
1903....	80.2	88.7	91.1	83.7	1910....	87.3	85.4	83.9	80.2	1917....	81.9	81.8	85.7	83.2
1904....	87.3	88.5	89.9	86.1	1911....	78.4	77.7	79.1	78.1	1918....	86.4	78.3	74.5	77.4
1905....	90.6	90.1	89.5	88.6	1912....	86.9	85.0	84.1	82.0	1919....	99.1	87.1	86.0	83.9
1906....	90.9	91.2	88.7	86.0	1913....	86.5	85.8	81.4	80.1	1920....	87.2	86.9	86.8	87.1
1907....	85.9	85.7	85.7	82.7	1914....	77.1	75.5	81.3	80.7	1921....	85.1	84.5	80.7	77.0

TABLE 132.—Sweet potatoes: Forecasts of production, monthly, with preliminary and final estimates.

[000 omitted.]

Year.	July.	August.	September	October.	November production estimate.	Final estimate.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1914.....	49,474	49,886	54,938	55,364	56,030	59,574
1915.....	64,067	62,779	65,274	64,800	66,650	75,639
1916.....	73,917	71,041	69,329	67,794	67,663	70,055
1917.....	82,196	86,405	88,151	87,244	84,727	83,822
1918.....	92,119	84,474	81,016	85,473	88,114	87,924
1919.....	101,942	100,456	100,320	99,413	102,946	97,126
1920.....	98,462	100,683	101,779	103,779	105,676	103,925
Average.....	80,311	79,349	80,118	80,552	81,687	82,281
1921.....	112,023	114,086	110,164	100,569	105,841	98,600

SWEET POTATOES—Continued.

TABLE 133.—Sweet potatoes: Yield per acre, price per bushel December 1, and value per acre, by States.

State.	Yield per acre (bushels).					Farm price per bushel (cents).										Value per acre (dollars). ¹			
	5-year aver- age 1917-1921.	1917	1918	1919	1920	1921	10-year aver- age 1912-1921.	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	5-year aver- age 1919-1920.	1921
N. J.	123	120	115	125	143	110	134	84	78	95	70	120	160	190	220	155	170	205.43	187.00
Pa.	126	110	120	140	138	124	130	75	96	86	75	135	140	155	180	153	180	195.38	228.20
Del.	120	112	120	138	128	100	91	68	60	70	62	81	120	125	110	100	110	123.09	110.00
Md.	123	118	130	140	128	100	99	63	60	70	70	83	100	150	133	115	140	151.00	140.00
Va.	117	104	120	140	127	95	101	75	70	76	65	90	110	145	155	95	125	148.61	118.75
W. Va.	119	140	106	115	119	115	139	90	100	98	92	126	140	204	210	150	180	201.73	207.00
N. C.	103	95	110	107	104	101	90	62	61	65	56	75	105	132	138	114	97	118.28	97.97
S. C.	96	95	95	90	105	95	96	68	75	70	65	85	104	142	148	117	90	112.57	85.50
Ga.	81	93	92	92	93	85	84	66	68	69	61	81	105	125	110	97	63	93.77	53.55
Fla.	97	95	110	100	95	85	98	73	75	80	68	86	115	125	140	120	96	117.35	81.60
Ohio	100	95	96	100	103	107	146	87	106	96	98	150	175	175	215	175	178	173.60	190.46
Ind.	114	108	108	105	120	132	141	89	103	90	90	150	165	195	215	160	150	191.65	198.00
Ill.	96	97	82	95	97	110	123	95	106	95	82	125	150	175	175	135	90	139.74	99.00
Iowa	92	90	93	67	104	104	178	108	150	127	108	192	210	210	250	247	175	196.68	182.00
Mo.	103	112	91	104	110	100	130	95	105	96	82	150	141	186	187	155	100	159.43	100.00
Kans.	108	92	80	109	135	125	141	103	110	106	100	150	160	222	185	160	115	176.09	143.75
Ky.	101	95	95	105	105	104	115	85	94	77	70	100	125	175	160	150	115	149.10	119.00
Tenn.	101	95	98	112	102	100	94	72	80	69	59	87	105	136	117	123	95	115.31	95.00
Ala.	93	90	96	94	97	90	83	71	67	65	57	74	92	115	113	100	73	90.24	65.70
Miss.	91	65	95	105	110	80	80	62	62	63	55	67	97	104	112	105	74	89.98	59.20
La.	88	79	75	90	101	94	82	65	70	64	50	66	104	128	115	93	65	87.00	61.10
Tex.	87	78	53	110	105	82	113	104	95	87	70	90	140	175	150	130	85	118.46	69.70
Okl.	96	90	65	110	115	98	131	109	104	89	73	135	160	220	180	132	106	147.34	103.83
Ark.	102	110	90	100	105	105	93	90	80	77	61	90	96	138	115	105	82	107.39	86.10
N. Mex.	121	118	125	120	118	126	181	105	130	113	120	180	205	250	225	220	260	261.80	327.60
Ariz.	137	150	135	150	125	125	193	150	170	150	150	185	227	228	250	230	182	324.06	227.50
Calif.	143	167	170	130	127	120	122	94	100	87	80	100	150	150	179	160	125	220.28	150.00
U. S.	97.1	91.2	93.5	103.2	104.8	92.6	94.7	72.6	72.6	73.0	62.1	81.8	110.8	135.2	134.4	113.4	88.1	112.55	81.53

¹ Based upon farm price Dec. 1.

TABLE 134.—Sweet potatoes: Farm price, cents per bushel on 1st of each month, 1910-1921.

Year.	Jan. 1.	Feb. 1.	Mar. 1.	Apr. 1.	May 1.	June 1.	July 1.	Aug. 1.	Sept. 1.	Oct. 1.	Nov. 1.	Dec. 1.	Yearly aver.
1910.	75.0	76.8	79.4	82.4	83.4	79.4	75.1	78.2	81.2	77.6	71.8	67.1	77.5
1911.	75.0	80.4	84.4	91.2	99.3	98.7	99.0	105.8	102.6	91.8	90.9	75.5	91.2
1912.	83.0	90.2	98.0	109.9	118.0	115.0	112.2	107.8	95.7	84.4	76.8	72.6	97.0
1913.	80.4	85.4	88.9	92.6	93.8	92.0	90.1	94.1	94.3	83.9	75.7	72.6	87.0
1914.	79.2	84.3	86.7	89.6	94.5	94.2	82.6	97.5	92.8	87.3	76.3	73.0	86.5
1915.	79.0	82.0	84.7	90.7	95.6	96.7	88.9	85.8	84.6	72.7	63.7	62.1	82.2
1916.	64.9	71.2	77.3	78.0	80.5	83.4	79.4	87.1	89.9	83.7	80.6	84.8	80.1
1917.	90.1	95.8	110.7	124.0	141.3	149.4	140.5	129.3	132.6	116.1	111.2	110.8	121.0
1918.	117.2	123.1	142.7	151.6	155.0	148.8	134.3	144.7	156.2	160.6	146.0	135.2	143.0
1919.	142.1	143.1	153.7	160.7	174.0	173.7	159.8	167.9	175.4	154.7	143.9	134.4	157.0
1920.	133.2	156.6	172.2	185.8	205.2	216.6	213.6	223.5	200.7	160.8	122.1	113.4	176.7
1921.	113.0	117.8	119.8	127.4	127.2	128.8	125.0	144.1	135.6	108.3	59.5	88.1	118.7
Average 1912-1921	98.7	105.0	113.5	121.0	128.6	129.9	122.6	128.2	125.8	111.2	98.6	94.7	114.8

SWEET POTATOES—Continued.

TABLE 135.—Sweet potatoes: Wholesale price per barrel, 1921-1913.

Date.	Baltimore.			St. Louis.			New Orleans.			New York.		
	All grades.			All grades (per bushel).			All grades.			Jersey and Southern.		
	Low.	High.	Aver.	Low.	High.	Aver.	Low.	High.	Aver.	Low.	High.	Aver.
1921.												
January.....	\$3.00	\$4.50	\$3.89	\$1.00	\$2.00	\$1.62	\$0.75	\$1.75	\$1.52	.....	.....	.....
February.....	3.00	4.50	3.66	1.00	1.75	1.41	.75	2.50	1.65	\$3.00	\$5.00	\$4.08
March.....	3.50	6.00	4.62	1.25	1.85	1.53	.75	2.75	1.55	1.85	5.00	3.02
April.....	3.00	5.50	3.92	1.50	2.10	1.76	.75	3.25	1.96	2.00	4.00	3.05
May.....	4.00	4.50	4.25	1.75	2.10	1.85	2.00	3.25	2.24	2.00	4.00	3.00
June.....	.....	.....	.....	1.75	2.00	1.87	.....	.....	.....	.....	.....	.....
July.....	7.00	8.00	7.50	2.25	4.00	3.34	1.75	3.75	2.81	.....	.....	.....
August.....	3.75	5.50	4.64	.75	3.25	2.22	.90	2.00	2.46	4.00	6.00	5.33
September.....	2.00	4.25	3.33	.75	1.50	2.21	.40	1.75	1.08	2.50	4.25	3.41
October.....	2.00	3.50	2.81	.50	.85	.71	.25	1.75	1.03	2.00	4.00	2.99
November.....	2.00	4.00	2.89	.50	1.40	.86	.25	1.75	1.06	2.50	4.00	3.25
December.....	2.50	4.50	3.38	.60	2.00	.92	.40	1.60	.94	2.00	4.25	3.12
	2.00	8.00	4.08	.50	4.00	1.69	1.75	3.75	2.03	1.85	6.00	3.47
1920.....	2.00	14.00	5.40	1.00	4.00	1.84	.75	7.00	2.27	1.00	10.50	4.38
1919.....	2.25	12.00	6.06	.90	4.25	1.99	.75	5.50	2.44	1.50	8.50	4.50
1918.....	1.00	10.00	5.45	.65	3.25	1.73	1.00	7.00	3.14	1.25	10.00	3.11
1917.....	.50	12.00	.....	.40	2.75	.....	.65	1.60	.....	.50	9.00	.....
1916.....	1.00	5.50	.....	1.50	3.25	.....	.50	2.50	.....	1.00	5.50	.....
1915.....	.75	6.50	.....	1.50	4.50	.....	.75	3.00	.....	.50	5.00	.....
1914.....	1.00	5.50	.....	1.50	4.50	.....	.80	3.50	.....	.75	5.00	.....
1913.....	.75	7.00	.....	.88	6.25	.....	2.00	2.00	.....	.40	5.50	.....

¹ Low, high, and average for first 8 months.

TABLE 136.—Sweet potatoes: Monthly average jobbing prices per bushel at 10 markets, 1921.

Market.	January average.	February average.	March average.	April.		May.	
				Range.	Average.	Range.	Average.
New York.....	\$1.76	\$1.82	\$2.40	\$1.50-\$2.75	\$2.32	\$2.00-\$3.00	\$2.73
Chicago.....	2.20	2.29	2.35	1.75-3.25	2.40	1.75-2.50	2.13
Philadelphia.....	1.53	1.55	1.74	1.25-2.00	1.66	.80-1.90	1.63
Pittsburgh.....	1.91	1.73	2.03	1.40-2.15	1.89	1.50-2.15	1.92
St. Louis.....	1.68	1.85	1.78	1.50-2.10	1.81	1.80-1.90	1.84
Cincinnati.....	1.71	1.95	1.78	1.31-3.00	1.80	1.35-2.10	1.89
St. Paul.....	2.18	2.26	2.37	2.25	2.25	.....	.....
Minneapolis.....	2.25	2.28	2.41	2.25	2.25	.....	.....
Kansas City.....	1.59	1.64	1.66	1.75-2.25	1.92	1.85-2.25	2.01
Washington ¹	1.66	1.73	1.72	1.38-2.00	1.59	1.62-2.50	1.99

Market.	August. ²		September.		October average.	November average.	December average.
	Range.	Average.	Range.	average.			
New York.....	\$1.23-\$2.00	\$1.51	\$0.88-\$2.25	\$1.48	\$1.26	\$1.36	\$1.67
Chicago.....	1.14-2.75	2.01	.80-2.50	1.70	1.57	1.48	1.65
Philadelphia.....	1.15-1.50	1.33	.92-1.36	1.14	1.02	1.03	1.43
Pittsburgh.....	.75-2.50	1.55	1.14-2.25	1.62	1.49	1.50	1.69
St. Louis.....	1.00-1.40	1.23	.50-1.38	1.09	.94	.....	1.11
Cincinnati.....	.90-1.54	1.19	.90-1.40	1.21	1.11	.98	1.27
St. Paul.....	.....	.....	1.50-3.00	2.05	1.77	1.79	1.89
Minneapolis.....	2.15-3.25	2.47	1.62-2.75	2.24	1.89	1.85	2.07
Kansas City.....	1.50-1.65	1.56	1.00-1.50	1.25	1.01	1.10	1.21
Washington ¹	1.27-1.62	1.40	.85-1.35	1.10	.97	.96	1.26

¹ Sales direct to retailers.² Quotations began August 23.

SWEET POTATOES—Continued.

TABLE 137.—Sweet potatoes: Carlot shipments by States of origin for 1919-1921.

State.	1919	1920	1921	State.	1919	1920	1921
New Jersey.....	1,881	2,643	2,843	Mississippi.....	103	66	115
Delaware.....	1,095	1,135	1,934	Louisiana.....	19 ¹	426	680
Maryland.....	930	1,208	1,512	Texas.....	463	512	663
Virginia.....	5,754	5,244	5,340	Arkansas.....	193	405	523
North Carolina.....	666	860	988	New Mexico.....	(¹)	29	34
Georgia.....	400	676	1,116	California.....	718	722	888
Florida.....	85	75	92	All other.....	78	112	433
Illinois.....	205	208	130				
Tennessee.....	596	1,153	1,152	Total.....	13,725	16,254	19,041
Alabama.....	364	480	598				

¹ Included in all other.

HAY.

TABLE 138.—Hay: Acreage, production, value, exports, etc., in the United States, 1849-1921.

[See note for Table 117.]

Year.	Acreage (000 omit- ted).	Average yield per acre.	Production (000 omit- ted).	Average farm price per ton Dec. 1	Farm value Dec. 1 (000 omit- ted).	Chicago prices No. 1 timothy per ton, by carload lots.				Domestic ex- ports, fiscal year be- ginning July 1.	Imports, fiscal year be- ginning July 1.
						December.		Following May.			
						Low.	High.	Low.	High		
	Acres.	Tons. ¹	Tons. ¹	Dolls.	Dollars.	Dolls.	Dolls.	Dolls.	Dolls.	Tons. ²	Tons. ²
1849.....			13,839								
1859.....			19,084							5,711	
1860-1875.....	20,418	1.22	24,929	11.51	286,821					11,665	82,510
1876-1885.....	31,124	1.21	38,724	9.11	352,577	11.56	12.36	12.38	14.22		
1886-1895.....	40,127	1.18	47,401	8.87	420,673	10.75	11.75	11.70	14.42	34,724	121,213
1896.....	40,978	1.33	54,330	7.48	406,957	8.00	8.50	8.50	9.00	61,653	119,942
1897.....	41,336	1.42	58,878	7.28	428,919	8.00	8.50	9.50	10.50	81,827	3,887
1898.....	43,120	1.55	66,772	6.63	412,905	8.00	8.25	9.50	10.50	64,916	19,872
1899.....	43,127	1.83	57,450	8.20	470,844	10.50	11.50	10.50	12.50	72,716	143,890
1900.....	42,070	1.27	53,231	9.72	517,399	11.50	14.00	12.50	13.50	89,364	142,620
1901.....	42,066	1.33	55,819	9.91	533,328	13.00	13.50	12.50	13.50	153,431	48,415
1902.....	42,902	1.52	65,296	9.19	599,781	12.00	12.50	13.50	15.00	50,974	293,112
1903.....	43,400	1.57	68,154	9.35	637,485	10.00	12.00	12.00	15.00	60,730	114,388
1904.....	44,645	1.55	69,192	8.91	616,369	10.50	11.50	11.00	12.00	66,557	46,214
1905.....	45,991	1.59	72,973	8.59	627,023	10.00	12.00	11.50	12.50	70,172	68,540
1906.....	47,891	1.39	66,341	10.43	692,116	15.50	18.00	15.50	20.50	58,602	61,116
1907.....	49,093	1.47	72,691	11.78	850,915	13.00	17.50	13.00	14.00	77,281	10,063
1908.....	51,196	1.56	78,440	9.14	716,644	11.50	12.00	12.00	13.00	64,641	6,712
1909.....	51,041	1.46	74,384	10.58	786,722	16.00	17.00	12.50	16.00	55,007	96,829
1910.....	51,015	1.36	69,378	12.14	842,252	16.00	19.00	18.50	23.50	55,223	336,757
1911.....	48,240	1.14	54,916	14.29	784,926	20.00	22.00	24.00	28.00	59,730	699,004
1912.....	49,530	1.47	72,691	11.79	856,695	13.00	18.00	14.00	16.50	60,720	156,323
1913.....	48,954	1.31	64,116	12.43	797,077	14.50	18.00	15.00	17.50	50,151	170,786
1914.....	49,145	1.43	70,071	11.12	779,068	15.00	16.00	16.50	17.50	105,508	20,187
1915.....	51,108	1.68	85,920	10.63	913,644	14.50	16.50	17.50	20.00	178,336	43,184
1916.....	53,721	1.64	91,192	11.22	1,022,930	15.00	17.50	19.00	22.00	85,529	58,147
1917.....	55,203	1.51	83,308	17.09	1,423,766	26.00	28.00	20.00	26.00	30,145	410,738
1918.....	55,755	1.37	76,660	20.13	1,543,494	29.00	31.00	34.00	37.00	28,898	277,448
1919.....	56,888	1.52	86,359	20.08	1,734,085	28.00	32.00	35.00	50.00	59,948	224,952
1920.....	58,101	1.51	87,835	17.76	1,560,235	26.00	32.00	21.00	23.00	40,505	112,665
1921.....	58,742	1.39	81,567	12.13	989,693	20.00	24.00	26.00	28.00	.....	.....

¹ 2,000 pounds.² 2,240 pounds.³ Figures adjusted to census basis.

HAY—Continued.

TABLE 139.—Hay: Acreage, production, and total farm value, by States, 1920-21.

State.	Tame hay.						Wild, salt, and prairie hay.					
	Thousands of acres.		Production (thousands of tons).		Total value, basis Dec. 1 price (thousands of dollars).		Thousands of acres.		Production (thousands of tons).		Total value, basis Dec. 1 price (thousands of dollars).	
	1920	1921	1920	1921	1920	1921	1920	1921	1920	1921	1920	1921
Me.....	1,220	1,245	1,159	996	28,511	10,020	14	15	14	13	230	214
N. H.....	450	450	495	428	12,875	11,934	11	12	10	10	200	200
Vt.....	914	900	1,234	945	28,882	20,790	13	13	13	13	260	214
Mass.....	420	423	597	529	15,876	14,283	12	12	13	12	260	180
R. I.....	45	45	50	50	1,660	1,350	1	1	1	1	25	17
Conn.....	320	320	381	416	11,520	10,816	9	9	9	10	130	170
N. Y.....	4,895	4,895	6,119	4,895	144,408	88,110	63	65	77	65	1,336	975
N. J.....	301	300	497	396	13,668	7,128	20	23	27	23	405	354
Pa.....	2,939	3,025	4,115	3,630	96,702	61,710	22	23	27	23	436	336
Del.....	74	73	104	88	2,236	1,540	1	1	2	1	30	8
Md.....	399	399	618	526	15,450	7,943	4	4	6	5	102	52
Va.....	912	930	1,186	930	27,871	16,461	13	12	16	9	256	130
W. Va.....	718	725	898	870	21,732	15,225	11	11	13	12	208	144
N. C.....	640	600	672	711	13,456	14,078	43	42	52	42	967	546
S. C.....	360	396	335	360	8,375	7,200	6	6	7	6	126	96
Ga.....	660	693	535	610	12,572	9,638	19	19	17	19	306	243
Fla.....	115	110	75	80	1,425	1,590	6	6	6	5	150	80
Ohio.....	3,150	3,213	4,252	4,081	82,914	46,932	3	2	4	3	60	30
Ind.....	2,205	2,219	2,844	2,129	54,889	31,577	22	21	26	22	338	198
Ill.....	3,080	3,172	3,850	3,743	79,310	50,530	61	62	73	74	2,037	735
Mich.....	2,789	2,928	3,347	2,928	70,287	38,064	53	60	68	66	850	607
Wis.....	3,064	3,064	5,209	4,136	106,264	63,604	358	364	458	437	5,267	3,933
Minn.....	1,856	1,949	3,155	2,924	35,386	25,146	1,910	1,910	2,674	2,445	33,024	15,892
Iowa.....	3,100	3,148	4,712	4,659	76,523	43,329	490	475	622	551	8,459	4,077
Mo.....	3,192	3,200	3,958	3,616	62,141	35,437	140	129	157	142	1,384	852
N. Dak.....	916	961	1,145	1,297	11,336	9,987	2,308	2,308	2,193	2,308	25,220	17,310
S. Dak.....	976	970	1,708	1,358	14,518	8,601	3,615	3,500	4,049	2,800	33,870	15,400
Nobr.....	1,680	1,565	3,192	2,817	23,728	19,719	2,315	2,256	2,361	1,895	25,027	9,475
Kans.....	1,749	1,552	3,638	2,794	37,108	22,352	1,016	932	986	1,016	0,860	5,588
Ky.....	1,051	1,051	1,261	1,104	27,742	17,112	23	26	23	23	345	264
Tenn.....	1,356	1,329	1,736	1,528	35,588	23,684	50	50	58	58	1,056	667
Ala.....	764	836	657	769	12,812	11,996	25	25	25	32	475	384
Miss.....	400	428	576	492	9,907	7,154	41	40	53	40	991	448
La.....	206	208	288	266	4,608	3,724	14	15	18	20	312	200
Tex.....	556	639	778	882	10,426	8,732	194	203	213	223	3,195	2,074
Okla.....	837	910	1,387	1,383	14,564	11,341	521	485	625	485	7,500	2,862
Ark.....	647	670	751	724	12,016	9,050	137	129	158	135	2,496	1,215
Mont.....	1,195	1,045	1,989	1,881	23,868	16,365	652	657	619	526	3,571	4,524
Wyo.....	682	682	1,364	1,228	16,368	9,210	260	244	200	195	3,718	1,268
Colo.....	1,256	1,194	2,700	2,507	32,400	17,298	419	407	440	407	6,160	2,442
N. Mex.....	187	191	449	458	7,633	5,817	47	48	39	41	468	451
Ariz.....	123	150	351	450	11,049	5,850	8	15	6	15	66	165
Utah.....	461	490	1,208	1,284	15,704	7,961	107	106	132	117	1,320	585
Nev.....	172	177	401	473	6,416	4,257	176	179	176	199	1,760	1,791
Idaho.....	1,050	1,029	2,835	2,984	35,438	19,993	125	131	150	196	1,620	882
Wash.....	979	1,008	1,953	2,621	36,223	27,520	29	30	33	45	330	315
Oreg.....	950	995	2,138	2,288	31,001	22,422	228	233	274	266	2,055	1,152
Calif.....	2,150	2,129	4,945	5,003	98,900	55,083	170	167	177	184	2,124	1,288
U. S.....	58,101	58,742	87,855	81,567	1,560,235	989,693	15,787	15,483	17,460	15,235	198,115	101,083

HAY—Continued.

TABLE 140.—Hay: Stocks on farms May 1.

Year.	Production of all hay preceding year (tons).	Percent on farms May 1.	Tons on farms May 1.	Price per ton May 1.	Year.	Production of all hay preceding year (tons).	Percent on farms May 1.	Tons on farms May 1.	Price per ton May 1.
1910....	87,216,000	11.5	10,033,000	\$11.08	1917....	110,932,000	11.4	12,659,000	\$13.94
1911....	82,529,000	12.4	10,222,000	11.69	1918....	98,439,000	11.7	11,476,000	17.97
1912....	67,071,000	8.5	5,732,000	16.31	1919....	91,139,000	9.4	8,559,000	22.31
1913....	90,734,000	14.9	13,523,000	10.42	1920....	104,760,000	10.1	10,618,000	24.22
1914....	79,179,000	12.2	9,631,000	11.68	1921....	105,815,000	17.8	18,771,000	13.08
1915....	88,686,000	12.2	10,797,000	11.63	1922....	96,802,000	11.1	10,792,000	12.98
1916....	107,263,000	13.5	14,452,000	11.27					

TABLE 141.—Hay: Condition of crop, United States, on 1st of months named, 1908–1921.

Year.	May.	June.	July.	August.	Year.	May.	June.	July.	August.
1908.....	93.5	96.8	92.6	92.1	1915.....	91.2	89.6	87.5	90.1
1909.....	84.5	87.6	87.8	86.8	1916.....	88.2	90.7	93.5	95.7
1910.....	89.8	86.1	80.2	83.1	1917.....	88.7	83.1	84.2	84.6
1911.....	84.2	78.8	65.0	67.6	1918.....	89.6	89.0	82.2	82.3
1912.....	86.0	90.3	86.2	90.9	1919.....	94.3	94.1	91.1	91.0
1913.....	88.5	87.5	79.5	81.8	1920.....	89.4	88.9	86.7	90.5
1914.....	90.7	89.1	82.2	86.7	1921.....	91.5	85.0	79.5	82.5

TABLE 142.—Hay: Forecasts of production, monthly, with preliminary and final estimates.

[000 omitted.]

Year.	May.	June.	July.	August.	September production estimate.	Final estimate.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1917.....	106,371	102,088	103,184	100,154	91,715	98,439
1918.....	107,550	106,962	101,642	99,341	86,254	91,139
1919.....	114,930	115,907	115,701	110,876	103,544	104,760
1920.....	111,831	111,788	102,444	107,266	166,451	105,315
1921.....	107,784	100,977	96,961	97,073	94,619	¹ 96,802

¹ Preliminary.

HAY—Continued.

TABLE 143.—Hay: Yield per acre, price per ton December 1, and value per acre, by States.

State.	Yield per acre (tons).					Farm price per ton (dollars).																Value per acre (dollars). ¹	
	5-year average, 1917-1921.	1917	1918	1919	1920	1921	10-year average, 1912-1921.	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	5-year average, 1916-1920.	1921				
Me...	1.09	1.35	1.15	1.20	0.95	.80	15.63	13.70	13.90	13.10	14.90	12.40	11.10	13.90	18.70	24.60	20.00	18.95	16.00				
N. H.	1.15	1.35	1.15	1.20	1.10	.95	18.95	15.00	17.20	17.00	17.40	14.50	12.00	18.80	21.00	25.00	22.00	23.08	26.60				
Vt...	1.36	1.62	1.30	1.50	1.35	1.05	16.41	11.00	14.50	14.60	15.50	12.60	11.50	15.30	20.10	24.00	22.00	24.49	23.10				
Mass...	1.31	1.50	1.20	1.40	1.35	1.25	23.30	21.50	21.10	21.50	20.00	19.00	19.90	26.00	27.00	28.00	27.00	32.26	33.75				
R. I.	1.25	1.50	1.30	1.20	1.10	1.10	24.41	22.20	21.20	20.20	22.30	20.00	20.30	25.30	32.00	35.20	27.00	38.42	29.70				
Conn.	1.32	1.50	1.30	1.35	1.20	1.30	23.05	22.50	20.10	19.50	20.00	18.50	19.50	24.00	30.30	20.30	26.00	33.18	33.80				
N. Y.	1.27	1.46	1.25	1.40	1.25	1.00	17.00	14.90	13.30	14.60	15.70	14.90	15.10	20.40	20.36	23.00	18.00	25.01	18.00				
N. J.	1.18	1.45	1.50	1.50	1.65	1.32	21.77	20.06	19.00	19.50	19.00	17.60	20.00	28.00	29.10	27.50	18.00	37.64	23.76				
Pa...	1.35	1.41	1.41	1.35	1.40	1.20	18.01	15.60	14.90	14.50	15.60	13.80	17.50	23.70	24.00	33.50	17.00	29.10	20.40				
Del...	1.28	1.26	1.25	1.25	1.30	1.20	19.11	15.00	15.70	17.00	17.00	15.90	20.50	28.00	26.00	21.50	17.50	29.45	21.00				
Md...	1.38	1.25	1.35	1.40	1.55	1.35	18.50	14.00	15.20	15.30	16.20	14.00	19.00	26.80	24.00	25.00	15.10	30.83	20.38				
Va...	1.20	1.16	1.35	1.20	1.30	1.00	19.18	15.20	15.50	17.20	15.70	15.10	21.30	24.00	26.20	23.00	17.70	27.00	17.70				
W. Va.	1.24	1.27	1.30	1.20	1.25	1.20	18.85	15.00	14.90	17.20	15.00	14.50	21.00	23.50	25.60	24.20	17.50	28.13	21.00				
N. C.	1.09	1.13	1.20	1.02	0.95	0.95	19.10	16.70	16.50	17.10	16.50	17.50	19.70	21.00	24.20	20.30	19.80	23.81	20.39				
S. C.	.98	1.01	1.10	.90	.93	.91	20.87	18.00	18.70	17.00	15.60	16.70	20.60	26.10	31.00	25.00	20.60	24.76	18.20				
Ga....	.96	1.03	1.24	.85	.81	.88	19.05	17.00	17.90	16.20	15.10	16.20	20.00	23.50	25.30	23.50	15.80	21.78	13.90				
Fla....	.88	1.10	1.14	.77	.65	.73	18.37	18.10	18.20	17.20	16.00	16.00	18.20	18.50	23.00	19.00	19.50	15.23	14.24				
Ohio	1.36	1.42	1.40	1.35	1.35	1.27	13.65	13.00	12.80	13.40	12.70	10.60	19.00	22.20	21.80	19.10	11.50	26.09	14.60				
Ind...	1.30	1.45	1.45	1.22	1.29	1.08	15.39	11.40	14.10	14.10	11.00	10.90	18.70	19.80	21.00	19.30	13.00	24.56	14.04				
Ill...	1.28	1.21	1.35	1.25	1.35	1.25	15.97	12.60	14.10	14.40	10.80	11.30	20.00	21.00	21.00	20.60	13.50	24.87	15.93				
Mich.	1.19	1.50	1.03	1.20	1.20	1.00	15.81	12.70	13.10	12.00	12.20	10.60	17.20	23.50	23.40	21.00	13.00	21.08	13.00				
Wis...	1.58	1.70	1.40	1.77	1.70	1.35	11.90	12.10	11.10	9.30	9.90	11.60	17.30	21.60	20.30	20.40	15.40	30.00	20.79				
Minn.	1.61	1.65	1.40	1.90	1.70	1.50	9.30	6.10	6.60	6.10	6.40	7.00	12.10	14.10	14.50	11.20	8.60	19.61	12.90				
Iowa	1.41	1.23	1.30	1.53	1.52	1.48	12.48	9.50	9.60	10.10	8.70	9.00	16.80	18.20	17.40	16.24	9.30	22.00	13.76				
Mo...	1.15	1.15	.90	1.35	1.24	1.13	13.87	9.80	14.50	13.60	8.50	9.30	17.50	20.50	19.50	15.70	9.80	19.29	11.07				
N. D.	1.12	.88	1.10	1.00	1.25	1.35	8.60	5.50	5.80	5.20	5.70	6.00	11.50	14.60	14.10	9.90	7.70	12.57	10.40				
S. D.	1.60	1.50	1.60	1.75	1.75	1.40	7.80	6.10	6.50	5.70	5.30	5.40	10.60	10.00	10.30	8.50	6.40	16.13	8.96				
Nebr.	1.71	1.60	1.40	1.86	1.90	1.80	9.93	8.10	8.70	6.90	5.80	7.10	15.20	17.20	14.00	9.00	7.00	21.29	12.60				
Kans.	2.05	2.15	1.73	2.46	2.08	1.80	11.07	7.60	12.30	7.10	5.60	7.60	16.60	19.10	15.80	10.20	8.00	28.32	14.40				
Ky...	1.20	1.30	1.30	1.15	1.20	1.05	17.82	13.70	16.50	16.00	12.50	12.60	20.00	23.70	25.40	22.00	15.50	26.09	16.28				
Tenn.	1.23	1.20	1.35	1.16	1.28	1.15	18.42	15.80	16.20	17.00	13.90	15.00	19.30	21.00	27.00	20.50	15.50	26.76	17.82				
Ala...	.86	.80	.81	.90	.86	.92	16.14	16.00	14.20	13.80	12.40	13.00	16.20	20.30	22.30	19.50	15.60	16.11	14.35				
Miss.	1.32	1.45	1.20	1.35	1.44	1.15	14.60	12.50	13.50	12.00	11.00	11.00	15.30	18.50	20.50	17.20	14.50	22.45	16.68				
La...	1.40	1.60	1.30	1.44	1.40	1.25	11.70	12.70	12.50	12.00	10.30	11.00	11.30	21.20	23.00	16.00	14.00	21.93	17.92				
Tex...	1.28	1.00	1.00	1.60	1.40	1.38	13.66	10.40	11.80	9.80	7.90	10.50	20.00	21.90	18.00	13.40	9.90	21.01	13.66				
Okla.	1.55	1.60	1.20	1.82	1.60	1.52	10.90	7.40	10.40	7.90	5.60	9.00	15.40	19.50	15.10	10.50	8.20	21.52	12.46				
Ark...	1.23	1.47	1.30	1.21	1.61	0.84	14.51	12.00	13.50	12.90	10.30	12.50	15.40	19.50	20.50	16.00	12.50	21.03	13.50				
Mont.	1.52	1.40	1.60	1.00	1.80	1.80	12.70	8.30	9.60	8.70	7.50	11.00	18.60	19.60	23.00	12.00	8.70	24.14	15.66				
Wyo...	1.80	1.70	2.10	1.40	2.00	1.80	11.61	8.60	6.70	7.50	7.80	12.00	17.00	14.00	23.00	12.00	7.50	27.22	13.50				
Colo.	2.19	2.45	2.22	2.05	2.15	2.10	11.42	8.70	10.00	7.40	7.60	11.00	16.00	15.50	13.50	12.00	6.90	32.27	14.49				
N. M.	2.26	1.90	2.20	2.40	2.40	2.40	14.16	8.50	12.10	9.30	8.80	14.00	21.00	20.00	18.20	17.00	12.70	39.28	30.48				
Ariz...	3.26	3.50	3.20	3.50	3.10	3.60	16.67	12.00	11.00	8.80	9.60	14.50	24.80	24.00	20.00	29.00	13.00	75.72	39.00				
Utah	2.48	2.90	2.35	1.92	2.62	2.62	12.10	8.00	9.10	7.70	8.00	15.00	15.00	17.10	21.90	13.00	6.20	38.56	16.24				
Nev...	2.56	2.90	2.60	2.28	2.33	2.67	12.55	8.70	11.00	8.30	7.50	9.60	15.90	19.90	19.60	16.00	9.00	40.57	24.03				
Idaho	2.78	3.00	3.00	2.30	2.70	2.90	11.54	6.30	7.20	7.30	7.70	12.10	16.00	17.60	22.00	12.50	6.70	43.08	19.43				
Wash.	2.20	2.20	1.80	2.40	2.00	2.60	15.40	10.10	10.90	11.00	10.80	13.80	20.00	25.40	23.00	18.50	10.50	43.01	27.30				
Oreg.	2.00	1.95	1.80	1.72	2.25	2.30	12.78	8.30	9.00	9.20	9.50	10.90	17.50	20.00	19.10	14.50	9.80	32.13	22.54				
Calif.	2.03	2.00	1.25	2.25	2.30	2.35	14.66	13.70	13.50	8.20	11.20	12.60	19.10	20.00	17.20	20.00	11.00	34.03	25.85				
U. S.	1.46	1.51	1.37	1.52	1.51	1.39	14.44	11.79	12.43	11.12	10.63	11.22	17.09	20.13	20.08	17.76	12.13	25.83	16.85				

¹ Based upon farm price Dec. 1.

Statistics of Hay.

599

HAY—Continued.

TABLE 144.—*Wild, salt, and prairie hay: Acreage, production, and value, United States, 1909–1921.*

[000 omitted.]

Year.	Acre- age.	Yield per acre	Produc- tion.	Farm price per ton.	Farm value.	Year.	Acre- age.	Yield per acre	Produc- tion.	Farm price per ton.	Farm value.
	<i>Acres.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Dolls.</i>	<i>Dolls.</i>		<i>Acres.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Dolls.</i>	<i>Dolls.</i>
1909 ¹	17,186	1.07	18,383	.....	.....	1916.....	16,635	1.19	19,860	7.00	156,503
1910.....	17,187	.77	13,151	.....	.....	1917.....	16,212	.93	15,131	13.49	204,086
1911.....	17,187	.71	12,155	.....	.....	1918.....	15,365	.94	14,479	15.23	220,487
1912.....	17,427	1.04	18,043	.....	.....	1919.....	17,150	1.07	18,401	16.50	303,639
1913.....	16,341	.92	15,063	.....	.....	1920.....	15,787	1.11	17,460	11.35	198,115
1914.....	16,752	1.11	18,615	.....	.....	1921.....	15,483	.98	15,235	6.63	101,083
1915.....	16,796	1.27	21,343	6.80	145,125						

¹ Census figures.

TABLE 145.—*Hay: Farm price per ton, 1st of each month, 1908–1921.*

Year.	Jan. 1.	Feb. 1.	Mar. 1.	Apr. 1.	May 1.	June 1.	July 1.	Aug. 1.	Sept. 1.	Oct. 1.	Nov. 1.	Dec. 1.	Yearly aver- age.
1908.....	\$11.28	\$11.20	\$11.02	\$10.83	\$10.78	\$10.66	\$9.79	\$9.28	\$9.18	\$9.23	\$9.22	\$9.02	10.03
1909.....	9.09	9.27	9.47	9.65	10.12	10.70	10.50	9.74	9.67	10.03	10.35	10.50	9.93
1910.....	10.45	11.34	11.61	11.53	11.08	10.84	10.75	10.75	11.21	11.12	11.20	12.14	11.19
1911.....	11.69	11.80	11.57	11.36	11.69	12.38	13.19	13.83	13.63	13.53	13.61	14.29	12.83
1912.....	13.75	14.39	14.66	15.64	16.31	16.22	14.32	12.03	11.21	11.02	11.08	11.79	13.24
1913.....	11.11	10.86	10.61	10.43	10.42	10.55	10.47	10.43	11.04	11.45	11.51	12.43	11.02
1914.....	11.70	11.67	11.69	11.52	11.63	11.64	11.29	10.76	11.10	10.96	10.78	11.12	11.23
1915.....	10.47	10.83	10.89	10.98	11.03	11.16	10.85	10.19	9.95	9.83	9.98	10.63	10.50
1916.....	10.07	10.55	10.75	10.85	11.27	11.47	11.10	9.89	9.72	9.65	9.99	11.22	10.48
1917.....	10.86	11.34	11.54	12.53	13.94	14.68	13.96	12.90	13.26	13.83	15.16	17.09	13.53
1918.....	18.09	18.88	19.14	18.65	17.97	17.13	16.07	15.92	17.42	18.45	19.27	20.13	18.19
1919.....	19.92	19.79	19.82	20.52	22.31	23.30	21.73	20.16	20.52	19.79	19.36	20.08	20.45
1920.....	20.55	21.76	22.31	22.94	24.22	24.85	23.62	20.89	19.88	18.04	17.45	17.76	20.86
1921.....	16.16	15.24	14.28	13.61	13.08	12.52	12.61	11.73	11.70	11.36	11.13	12.13	12.87
Average, 1912–1921..	14.27	14.53	14.57	14.77	15.22	15.35	14.60	13.49	13.58	13.44	13.57	14.44	14.24

TABLE 146.—*Timothy and clover hay: Farm price per ton, 15th of each month, 1917–1921.*

Date.	Timothy.					Clover.				
	1917	1918	1919	1920	1921	1917	1918	1919	1920	1921
Jan. 15.....	\$12.61	\$21.37	\$23.48	\$24.59	\$19.88	\$11.38	\$19.82	\$21.69	\$23.78	\$19.17
Feb. 15.....	12.91	22.25	22.69	25.49	18.30	11.65	21.11	21.11	24.94	17.39
Mar. 15.....	13.20	22.53	22.68	26.75	17.04	11.90	21.37	21.25	26.13	16.44
Apr. 15.....	14.26	21.47	24.74	27.99	16.09	13.06	19.68	23.36	26.93	15.47
May 15.....	15.31	20.40	27.27	29.92	15.44	13.94	18.30	25.33	28.31	14.90
June 15.....	15.76	18.55	27.50	30.05	15.16	14.22	16.54	25.48	27.80	14.52
July 15.....	14.68	17.61	24.22	26.59	14.51	12.95	15.73	22.02	24.62	13.89
Aug. 15.....	14.11	18.98	23.89	24.35	15.01	12.76	17.18	21.53	22.82	14.17
Sept. 15.....	14.89	20.85	23.65	24.15	14.83	13.79	19.27	21.74	22.57	14.37
Oct. 15.....	16.23	22.60	23.04	22.74	14.39	15.01	20.60	21.17	21.29	13.99
Nov. 15.....	18.33	22.93	22.90	22.09	14.22	17.14	21.13	21.61	20.60	13.83
Dec. 15.....	20.31	22.94	23.71	21.22	14.31	18.67	21.26	22.60	19.96	14.17

HAY—Continued.

TABLE 147.—*Alfalfa and prairie hay: Farm price per ton, 15th of each month, 1917-1921.*

Date.	Alfalfa.					Prairie.				
	1917	1918	1919	1920	1921	1917	1918	1919	1920	1921
Jan. 15.....	\$12.79	\$21.27	\$20.42	\$24.13	\$14.98	\$8.58	\$15.39	\$16.33	\$17.51	\$14.20
Feb. 15.....	13.63	21.38	20.91	24.41	13.55	8.60	15.74	16.55	17.36	9.15
Mar. 15.....	14.68	20.82	21.40	24.68	12.88	9.32	15.47	17.38	16.52	8.70
Apr. 15.....	17.68	18.97	22.28	24.57	11.35	10.94	14.47	18.85	16.66	9.13
May 15.....	17.92	17.84	23.32	25.68	10.88	12.02	12.75	20.22	18.05	8.05
June 15.....	16.77	16.74	20.89	24.20	10.64	11.84	12.78	18.71	17.59	8.02
July 15.....	14.13	16.58	20.15	21.70	9.85	10.11	12.51	16.10	15.38	7.67
Aug. 15.....	15.28	18.22	20.72	20.43	9.66	10.82	13.26	16.10	13.74	7.50
Sept. 15.....	16.33	19.72	20.89	19.12	9.86	11.40	14.35	15.90	12.93	7.52
Oct. 15.....	17.59	20.23	20.56	18.03	8.92	12.29	15.06	15.88	11.83	6.78
Nov. 15.....	19.19	20.42	21.63	12.88	9.67	13.32	15.47	16.91	11.17	7.49
Dec. 15.....	20.39	20.74	22.95	16.59	10.46	14.91	16.30	17.19	10.80	7.47

TABLE 148.—*Hay: Extent and causes of yearly crop losses, 1909-1920.*

Year.	Deficient mois- ture.	Excessive mois- ture.	Floods.	Frost or freeze.	Hail.	Hot winds.	Storms.	Total climatic.	Plant disease.	Insect pests.	Animal pests.	Defective seed.	Total.
	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
1920.....	7.2	1.4	0.2	0.4	0.2	0.2	0.1	10.7	0.2	1.0	0.1	0.1	12.7
1919.....	9.9	1.9	.3	1.0	.1	.4	.1	13.9	.1	1.0	(¹)	.1	15.5
1918.....	17.5	.7	.2	2.7	.1	.3	.1	22.7	.1	.9	.1	(¹)	24.9
1917.....	11.5	1.3	.3	2.9	.2	.3	.1	16.8	.1	.4	.1	(¹)	18.3
1916.....	5.5	1.0	.3	1.1	.1	.3	.1	8.6	(¹)	.3	(¹)	(¹)	9.6
1915.....	3.7	4.9	.6	1.8	.1	.1	.3	11.9	.2	.5	.1	(¹)	13.9
1911.....	27.7	.8	(¹)	.9	.1	1.9	(¹)	31.9	.1	.6	.1	.1	34.7
1910.....	17.4	1.2	.3	1.2	.1	.5	.1	21.3	.1	.5	.2	.1	23.6
1909.....	10.7	2.2	.6	1.2	.1	.3	.3	15.7	.1	.5	.1	.1	17.6
Average.....	12.3	1.7	.3	1.5	.1	.5	.1	17.0	.1	.6	.1	.1	19.0

¹ Less than 0.05 per cent.TABLE 149.—*Hay: Monthly and yearly average price per ton, No. 1 timothy, Chicago, 1910-11 to 1921-22.¹*

Season.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Crop- year average.
1910-11.....	\$18.75	\$19.50	\$17.25	\$17.25	\$17.50	\$17.50	\$18.00	\$16.25	\$16.25	\$17.75	\$21.00	\$21.75	\$18.23
1911-12.....	23.50	21.50	20.00	20.50	21.25	21.00	21.75	20.75	21.50	21.00	26.00	21.25	21.92
1912-13.....	19.75	18.50	18.50	18.00	17.00	15.50	15.75	14.25	14.75	15.50	15.25	14.25	16.42
1913-14.....	15.00	17.75	17.75	18.00	17.00	16.25	15.50	14.75	15.25	16.00	16.25	15.25	16.23
1914-15.....	16.25	16.75	15.50	15.25	15.50	15.50	16.25	15.50	15.25	16.25	17.00	17.50	16.04
1915-16.....	19.25	20.25	19.00	17.00	15.50	15.50	16.25	15.50	16.75	18.75	18.75	18.00	17.51
1916-17.....	16.00	16.00	15.50	16.25	16.25	16.25	15.50	15.75	15.75	18.00	20.50	18.75	16.71
1917-18.....	17.75	19.25	21.00	25.09	27.25	27.00	28.25	29.00	28.00	24.00	23.00	19.00	24.04
1918-19.....	21.50	26.50	32.00	31.00	30.00	30.00	29.50	28.00	30.50	33.50	35.50	33.00	29.92
1919-20.....	34.50	35.00	29.00	29.00	29.50	30.00	32.50	34.00	35.25	43.00	46.50	42.75	35.00
1920-21.....	38.50	40.25	33.75	32.25	32.00	28.50	28.90	24.40	25.30	23.80	21.90	22.50	29.17
1921-22.....	24.40	24.00	24.20	22.60	22.90	21.90	.....	.....	.....	.....	.....	.....	.....
11-year average.	21.89	22.84	21.75	21.68	21.70	21.18	21.47	20.56	21.32	22.78	23.79	22.18	21.93

¹ From Chicago Board of Trade and Daily Trade Bulletin.

HAY—Continued.

TABLE 150.—Hay: Monthly and yearly average price per ton, No. 1 alfalfa, Kansas City, 1910-11 to 1921-22.¹

Season.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Crop-year average.
1910-11.....	\$12.08	\$13.50	\$13.89	\$14.25	\$14.25	\$14.23	\$13.51	\$12.93	\$13.07	\$13.67	\$13.29	\$12.38	\$13.42
1911-12.....	15.13	14.44	14.87	15.00	15.27	15.50	17.72	18.37	20.49	22.73	19.34	11.62	16.71
1912-13.....	12.59	13.00	13.58	15.11	15.11	15.00	14.79	12.86	14.06	13.75	13.28	10.70	13.65
1913-14.....	12.12	14.80	16.14	16.54	16.00	16.01	15.98	15.25	15.18	15.30	15.54	14.23	15.26
1914-15.....	12.38	13.42	13.32	12.51	13.21	13.79	13.75	13.73	14.75	15.11	13.73	13.42	13.59
1915-16.....	11.54	11.93	12.25	13.11	12.83	14.35	14.51	15.34	13.92	14.44	14.45	11.42	13.34
1916-17.....	11.29	13.40	13.58	15.68	18.50	19.33	19.81	20.25	21.10	24.33	24.52	21.87	18.64
1917-18.....	21.18	24.09	21.07	27.43	31.10	32.76	30.01	31.33	27.56	24.11	22.64	20.57	26.40
1918-19.....	22.60	29.08	31.45	30.14	31.21	31.01	32.85	31.01	34.56	37.90	36.20	36.43	32.04
1919-20.....	26.93	27.63	24.86	30.24	33.39	35.10	35.75	34.83	33.79	34.10	35.46	31.75	31.99
1920-21.....	27.21	29.49	27.22	23.95	25.05	23.01	23.30	20.30	20.30	21.00	22.20	18.40	23.45
1921-22.....	17.50	19.00	17.20	19.80	20.40	19.60	.....	.....	.....	.....	.....	.....	.....
11-year average.	16.82	18.61	18.66	19.45	20.54	20.92	21.09	20.56	20.80	21.49	20.97	18.44	19.86

¹ From Kansas City Daily Price Current and Kansas City Grain Market Review.

TABLE 151.—Hay: Monthly and yearly average price per ton, No. 1 prairie, Kansas City, 1910-11 to 1921-22.¹

Season.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Crop-year average.
1910-11.....	\$10.83	\$10.82	\$11.67	\$11.34	\$11.16	\$10.86	\$11.07	\$10.95	\$10.84	\$11.31	\$11.55	\$13.61	\$11.33
1911-12.....	15.93	12.93	11.50	11.60	12.07	12.61	13.84	13.66	16.70	20.85	20.48	15.16	14.78
1912-13.....	8.79	7.96	8.39	8.96	8.91	9.39	10.45	9.37	9.19	9.56	9.53	9.97	9.21
1913-14.....	10.60	13.62	15.76	16.00	15.66	15.57	14.20	14.50	14.40	16.00	16.42	15.43	14.85
1914-15.....	12.10	9.96	11.58	11.35	10.91	10.98	11.25	10.89	11.26	11.41	11.02	11.03	11.15
1915-16.....	11.32	8.65	8.63	9.71	9.54	8.97	8.84	9.15	8.96	9.50	9.74	8.65	9.31
1916-17.....	8.50	8.06	9.30	9.47	10.74	11.15	10.57	10.92	12.92	18.68	19.74	20.57	12.56
1917-18.....	18.14	18.57	18.06	19.60	25.07	25.47	24.00	23.79	23.42	21.13	19.17	17.66	21.17
1918-19.....	19.26	25.25	26.57	27.58	26.84	24.04	28.25	26.82	32.35	36.63	38.91	37.34	29.15
1919-20.....	20.89	19.98	19.32	19.75	21.12	25.34	21.40	20.68	20.04	21.70	24.02	18.65	21.15
1920-21.....	17.21	19.52	18.47	16.45	16.13	14.49	14.60	18.10	14.10	13.70	14.10	13.40	15.39
1921-22.....	12.30	11.40	11.30	12.40	12.00	11.30	.....	.....	.....	.....	.....	.....	.....
11-year average.	13.96	14.12	14.48	14.71	15.29	15.35	15.26	14.89	15.89	17.32	17.70	16.52	15.46

¹ From Kansas City Daily Price Current and Kansas City Grain Market Review.

HAY—Continued.

TABLE 152.—Hay: Monthly and yearly receipts, in tons, 1910-11 to 1921-22.

Crop year.	Baltimore.	Boston.	Chicago.	Kansas City.	Milwaukee.	Minneapolis.	New York.	Peoria.	Philadelphia.	Pittsburgh.	St. Louis.	San Francisco.	Total.
1910-11.....	68,589	162,420	273,953	308,940	38,313	66,806	336,471	37,419	86,851	119,685	253,540	184,594	1,937,111
1911-12.....	69,284	164,196	351,630	318,948	44,199	63,570	286,474	41,822	96,484	115,608	256,462	147,483	1,956,160
1912-13.....	58,939	139,920	274,769	343,392	47,138	37,290	296,866	38,131	82,063	106,993	222,998	141,224	1,789,723
1913-14.....	63,186	117,740	369,032	285,288	36,283	38,280	317,543	43,660	75,630	108,466	261,155	133,598	1,844,861
1914-15.....	54,904	115,161	325,095	398,604	45,060	45,513	330,098	33,957	78,583	83,923	308,727	161,750	1,981,375
1915-16.....	50,415	126,590	273,181	398,172	34,637	45,376	294,395	51,299	84,066	106,710	232,628	146,560	1,843,969
1916-17.....	50,874	123,780	237,932	359,316	24,360	35,652	212,256	48,870	78,284	92,202	210,591	104,468	1,578,585
1917-18.....	64,053	97,150	352,730	419,964	23,131	39,126	199,727	40,250	61,618	74,075	237,506	82,460	1,691,790
1918-19.....	41,870	67,000	287,031	386,460	16,656	28,457	221,589	35,050	31,571	72,721	213,043	72,440	1,473,879
1919-20.....	32,650	58,740	225,050	599,340	19,053	22,601	167,088	33,366	52,466	63,680	254,042	85,807	1,613,823
1920-21.....	19,559	50,220	149,801	337,169	19,466	23,015	150,338	21,140	40,057	79,062	188,550	75,272	1,153,649
11-yr. av.	52,211	111,174	283,658	377,781	31,663	40,472	255,712	38,628	69,783	92,557	239,931	121,423	1,714,993
1920-21.													
1920:													
July.....	2,664	4,740	12,605	30,468	1,340	1,484	20,566	2,060	2,808	6,511	16,997	9,524	117,767
Aug.....	1,630	3,640	6,667	44,028	1,047	1,863	12,477	4,450	4,980	7,980	18,091	14,161	121,014
Sept.....	1,496	3,220	9,872	47,820	1,622	1,357	14,940	5,870	3,624	4,530	25,256	9,127	128,734
Oct.....	1,778	5,780	12,957	22,512	2,094	2,072	17,108	2,990	4,283	7,474	14,204	5,620	97,972
Nov.....	1,179	3,870	12,269	35,184	2,150	2,161	18,553	1,670	3,444	7,630	16,860	6,675	111,645
Dec.....	2,308	3,500	19,969	27,156	1,641	2,707	12,486	1,060	3,640	8,536	17,734	4,730	105,467
1921:													
Jan.....	1,768	3,890	20,784	29,535	2,135	2,791	10,844	950	3,000	5,699	14,636	3,146	99,178
Feb.....	1,597	3,790	10,621	38,874	1,620	2,006	7,265	840	2,388	6,716	17,267	3,920	96,904
Mar.....	1,195	5,350	9,897	25,553	1,473	2,299	8,974	960	2,470	6,408	20,327	6,065	90,971
Apr.....	1,023	2,910	11,147	12,961	1,584	1,679	8,474	440	2,856	5,892	9,662	4,049	62,677
May.....	1,883	4,780	11,206	11,281	1,764	1,294	10,502	400	3,684	6,864	8,945	3,791	66,394
June.....	1,038	4,750	11,807	5,797	996	1,302	8,149	350	2,880	4,822	8,571	4,464	54,926
Total..	19,359	50,220	149,801	337,169	19,466	23,015	150,338	21,140	40,057	79,062	188,550	75,272	1,153,649
1921-22.													
1921:													
July.....	928	3,030	9,508	12,001	600	883	9,474	240	2,100	1,848	7,525	6,035	54,172
Aug.....	1,251	5,790	14,021	14,201	1,032	1,958	8,770	690	2,520	6,336	9,833	12,938	79,340
Sept.....	974	5,200	4,977	11,143	1,380	1,393	8,468	440	2,412	5,268	9,036	5,939	57,230
Oct.....	1,122	2,390	13,453	14,674	1,695	2,659	9,979	710	4,488	6,288	11,590	4,734	73,782
Nov.....	815	7,450	9,590	15,637	1,978	1,793	9,827	980	3,900	11,436	11,729	3,674	78,809
Dec.....	1,182	2,110	14,614	13,354	1,920	2,291	7,156	660	4,596	4,684	9,974	2,876	65,417
Total..	6,272	25,970	66,163	81,010	8,605	10,977	53,674	3,720	20,016	35,860	60,287	36,196	408,750

Sources: Hay Trade Journal, Annual Report of the San Francisco Merchants' Exchange, Minneapolis Chamber of Commerce Report, Minneapolis Daily Market Report.

HAY—Continued.

TABLE 153.—Hay: Monthly and yearly shipments, in tons, 1910-11 to 1921-22.

Crop year.	Balti- more.	Chi- cago.	Kansas City.	Mil- wau- kee.	Minne- apolis.	Peoria.	Pitts- burgh.	St. Louis.	Total.
1910-11.....	11,864	18,011	93,828	5,958	31,350	10,373	76,631	112,435	360,460
1911-12.....	13,257	49,160	58,806	4,445	28,910	17,222	75,420	136,285	333,595
1912-13.....	8,313	22,681	85,176	3,159	4,820	7,819	65,800	105,533	303,301
1913-14.....	8,985	39,184	78,756	9,718	5,500	16,077	65,148	139,376	362,754
1914-15.....	8,896	83,414	67,608	17,306	5,390	19,788	37,512	172,590	412,504
1915-16.....	9,681	55,791	73,668	6,811	4,186	9,076	87,216	90,415	337,444
1916-17.....	13,637	33,439	138,432	5,765	4,351	15,324	55,032	103,990	369,990
1917-18.....	26,913	62,665	222,912	5,293	7,042	10,621	20,536	177,240	533,222
1918-19.....	20,221	52,802	143,040	2,986	4,147	7,650	23,511	119,625	373,982
1919-20.....	4,118	32,637	276,492	5,270	6,925	6,151	26,267	111,665	409,535
1920-21.....		18,631	153,648	3,863	2,020	7,100	40,480	63,250	288,992
11-year average.....	11,447	42,583	126,587	6,419	9,510	11,618	52,141	122,039	332,344
1920-21:									
July.....		2,007	15,456	768	171	500	4,960	3,550	27,412
August.....		1,097	16,956	288	208	260	1,970	4,565	25,174
September.....		2,377	16,680	490	109	1,470	4,085	8,845	34,016
October.....		1,446	8,376	264	122	870	2,400	6,030	19,508
November.....		1,325	11,388	288	57	790	9,450	4,070	27,568
December.....		1,791	11,856	168	256	740	3,854	7,225	28,890
January.....		2,206	20,904	180	219	870	2,310	6,930	33,679
February.....		1,435	23,568	180	193	370	3,509	7,460	30,715
March.....		2,209	13,332	302	160	710	3,422	7,395	27,530
April.....		1,391	6,395	228	282	150	2,180	2,745	13,372
May.....		624	3,696	363	181	150	1,290	2,445	8,769
June.....		663	2,040	324	62	220	1,050	2,170	6,529
Total.....		18,631	153,648	3,863	2,020	7,100	40,480	63,250	288,992
1921-22:									
July.....		184	4,500	360	140	110	680	3,010	8,984
August.....		803	1,518	441	94	220	1,710	2,780	7,336
September.....		731	1,020	618	117	200	930	4,550	8,196
October.....		550	2,124	742	137	390	6,110	2,000	12,683
November.....		418	2,328	600	72	370	3,369	2,460	11,617
December.....		577	3,576	436	226	290	926	2,565	8,226
Total.....		3,263	15,096	3,237	786	1,580	15,755	17,955	57,702

Sources: Hay Trade Journal, Peoria Board of Trade Report, Annual Report of the Kansas City Board of Trade, Daily Trade Bulletin, Kansas City Grain Market Review, Minneapolis Daily Market Record.

FEED.

TABLE 154.—Feed: Monthly and yearly average price per ton at Minneapolis, 1916 to 1921.¹

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly average.
Bran:													
1916.....	\$18.78	\$20.10	\$18.54	\$18.63	\$19.05	\$18.32	\$17.69	\$20.03	\$21.71	\$24.50	\$27.08	\$25.93	\$20.87
1917.....	28.75	32.55	31.20	38.54	33.77	26.97	32.15	31.83	30.28	30.55	33.46	38.02	32.59
1918.....	32.50	32.50	32.85	33.04	31.27	30.74	26.00	29.31	29.06	28.45	27.80	33.49	30.58
1919.....	47.26	42.83	38.09	39.78	37.39	34.20	37.41	40.38	37.49	36.82	37.94	41.50	39.26
1920.....	41.98	42.68	40.69	50.26	53.25	50.78	47.83	41.88	38.42	30.63	31.85	28.23	42.04
1921.....	25.93	21.44	21.64	16.41	15.97	14.80	14.06	13.93	12.97	12.15	14.79	20.63	17.06
6-year average	32.53	32.02	32.00	32.78	31.78	29.30	29.19	29.56	28.32	27.18	28.82	31.30	30.40
Middlings:													
1916.....	19.41	21.61	20.22	19.50	20.06	20.10	19.88	21.45	22.50	27.19	30.81	27.88	22.56
1917.....	28.83	32.55	31.20	39.56	36.15	33.27	41.90	41.78	35.09	30.25	37.40	39.06	34.33
1918.....	31.50	34.50	31.85	35.01	33.27	32.69	27.61	31.00	30.90	30.77	30.69	36.27	32.63
1919.....	44.84	41.14	38.36	40.74	41.81	42.90	47.22	53.08	51.46	44.44	41.22	43.13	45.06
1920.....	43.97	47.28	51.37	54.88	57.77	56.06	51.22	52.56	45.65	30.62	28.86	23.91	45.62
1921.....	23.47	20.91	20.89	15.38	15.29	14.83	14.07	14.64	13.97	13.16	15.35	20.73	16.89
6-year average	33.17	33.50	33.38	34.18	34.56	33.31	34.15	35.76	33.26	30.40	30.62	31.83	33.18

¹ Compiled from Minneapolis Daily Market Record.

FEED—Continued.

TABLE 155.—*Feed: Monthly and yearly average price per ton, oil meal, New York, 1910-11 to 1921-22.*¹

Season.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Crop-year average.
1910-11.....	\$37.46	\$36.90	\$35.50	\$35.50	\$35.50	\$35.50	\$35.50	\$34.12	\$33.75	\$33.50	\$34.33	\$35.71	\$35.27
1911-12.....	40.00	40.75	40.12	39.00	39.65	40.17	39.75	38.80	38.10	37.30	36.57	35.50	38.81
1912-13.....	35.38	35.30	34.38	32.75	32.34	31.90	29.20	27.86	28.12	28.25	29.40	30.12	31.25
1913-14.....	32.50	32.00	31.40	31.25	31.25	31.35	31.25	31.50	31.50	32.27	32.80	34.60	31.97
1914-15.....	33.62	32.83	32.75	35.10	38.75	41.00	37.13	35.50	32.50	32.50	35.31	37.71	35.39
1915-16.....	39.70	33.75	38.50	40.50	40.60	39.50	36.63	32.86	31.50	32.12	33.00	37.00	36.72
1916-17.....	39.50	42.28	45.45	47.50	48.50	48.50	48.33	47.00	49.44	49.25	51.08	53.50	47.53
1917-18.....	53.00	54.00	54.42	57.00	58.15	58.50	58.50	57.00	52.50	50.00	52.80	54.00	54.99
1918-19.....	55.00	56.00	55.75	56.50	62.15	63.35	65.50	65.50	70.50	75.50	82.30	90.25	66.53
1919-20.....	81.58	73.80	78.75	80.75	81.50	71.75	70.40	62.50	60.00	60.00	60.00	60.00	70.09
1920-21.....	60.00	60.00	56.80	52.00	48.38	43.12	43.75	46.00	36.25	37.00	41.60	46.88	47.65
1921-22.....	46.30	40.00	40.75	48.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
11-year average.	46.16	45.69	45.80	46.17	46.98	45.88	45.09	43.51	42.20	42.52	44.47	46.84	45.11

¹ From Annual Statistical Review of New York Produce Exchange and the Oil, Paint, and Drug Reporter.TABLE 156.—*Feed: Monthly and yearly price per ton, cottonseed meal, Memphis, 1910-11 to 1921-22.*¹

Season.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Crop-year average.
1910-11.....	\$26.00	\$25.75	\$25.38	\$24.38	\$24.38	\$23.88	\$23.25	\$23.25	\$23.88	\$23.88	\$24.50	\$25.63	\$24.51
1911-12.....	26.50	25.75	24.63	24.63	24.63	24.38	25.13	26.00	27.25	28.00	27.23	26.75	25.91
1912-13.....	26.75	25.63	24.38	24.63	25.50	25.75	25.13	25.13	26.75	28.00	28.75	30.63	26.42
1913-14.....	31.75	27.00	27.13	27.38	27.25	26.75	26.13	26.75	27.63	27.75	27.50	27.75	27.56
1914-15.....	28.00	23.75	22.75	22.38	23.50	24.75	27.25	26.88	26.50	26.00	25.25	25.13	25.18
1915-16.....	25.63	27.13	30.60	32.00	34.00	32.25	29.00	28.38	28.88	27.75	27.25	27.25	29.17
1916-17.....	28.25	30.75	35.25	39.25	39.00	37.50	36.25	36.25	38.50	39.50	42.25	44.50	37.27
1917-18.....	45.50	43.00	45.50	49.75	46.50	46.50	46.50	46.50	46.50	46.50	46.50	46.50	46.31
1918-19.....	46.50	46.50	46.50	54.00	54.00	54.00	54.00	54.00	54.00	54.00	59.13	69.75	53.87
1919-20.....	76.25	63.00	66.50	70.25	69.25	71.00	65.00	65.75	64.81	65.13	63.63	59.40	66.66
1920-21.....	55.00	51.25	39.50	34.13	28.00	28.33	26.50	25.17	23.50	28.92	29.75	34.00	33.07
1921-22.....	36.44	36.00	34.50	33.44	34.20	.....	.....	.....	.....	.....	.....	.....	.....
11-year average.	37.83	35.41	35.27	36.62	36.00	35.92	34.92	34.91	35.29	35.95	36.52	37.94	36.03

¹ Figures prior to 1919 from Cotton Oil Press.

CLOVER AND TIMOTHY SEED.

TABLE 157.—*Clover seed: Acreage, production, and value, by States, 1920-21, and totals, 1916-1921.*

State and year.	Thousands of acres.		Average yield per acre.		Production (thousands of bushels).		Average farm price per bushel Nov. 15.		Total value, basis Dec. 1 price (thousands of dollars).	
	1920	1921	1920	1921	1920	1921	1920	1921	1920	1921
New York.....	11	9	2.4	1.9	26	17	\$13.00	\$13.00	338	221
Pennsylvania.....	22	18	1.6	1.4	35	25	12.90	10.25	452	253
Ohio.....	195	172	1.3	1.3	254	224	12.30	10.70	3,124	2,397
Indiana.....	95	57	1.5	1.2	142	68	10.90	10.30	1,548	700
Illinois.....	196	143	1.7	1.4	333	200	10.95	10.05	3,646	2,010
Michigan.....	117	111	1.5	1.5	176	166	10.60	9.75	1,866	1,618
Wisconsin.....	172	124	1.9	1.7	327	211	11.50	9.90	3,760	2,089
Minnesota.....	33	30	2.2	2.1	73	63	12.90	10.60	942	630
Iowa.....	142	125	2.0	1.6	284	200	12.25	9.70	3,479	1,940
Missouri.....	27	17	2.2	1.7	59	29	10.80	10.55	637	306
Nebraska.....	5	4	2.3	2.2	12	9	16.00	9.00	192	81
Kansas.....	7	3	2.2	2.3	15	7	9.80	9.00	147	63
Kentucky.....	25	18	2.1	1.9	52	34	15.00	10.00	780	340
Tennessee.....	8	4	1.7	1.7	14	7	15.00	11.00	210	77
Mississippi.....	6	8	6.0	5.0	36	40	25.00	17.50	900	700
Idaho.....	16	18	5.5	4.5	88	81	11.25	9.75	990	790
Oregon.....	5	8	3.6	3.7	18	30	12.00	9.00	216	270
Total.....	1,082	869	1.8	1.6	1,944	1,411	11.95	10.27	23,227	14,488
1919.....	942		1.6		1,484		20.75		29,760	
1918.....	820		1.5		1,197		19.80		23,705	
1917.....	821 ¹		1.8		1,488		12.84		19,107	
1916.....	939		1.8		1,706		9.18		15,661	

TABLE 158.—*Clover seed: Forecasts of production, monthly, with preliminary and final estimates.*

[000 omitted.]

Year.	Septem-ber.	October.	Novem-ber pro-duction estimate.	Final estimate.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1917.....	1,179	1,078	1,356	1,488
1918.....	1,404	1,383	1,248	1,197
1919.....	994	1,015	957	1,484
1920.....	1,452	1,576	1,593	1,944
1921.....	1,315	1,360	1,214	1,411

¹ Preliminary.

CLOVER AND TIMOTHY SEED—Continued.

TABLE 159.—Clover seed: Farm price per bushel, 15th of each month, 1910–1921.

Year.	Jan. 15.	Feb. 15.	Mar. 15.	Apr. 15.	May 15.	June 15.	July 15.	Aug. 15.	Sept. 15.	Oct. 15.	Nov. 15.	Dec. 15.	Yearly aver- age.
1910.....	\$8.26	\$8.26	\$8.15	\$7.91	\$7.47	\$7.24	\$7.17	\$7.53	\$8.27	\$8.13	\$7.70	\$7.94	\$7.84
1911.....	8.27	8.37	8.56	8.79	8.74	8.80	8.83	9.65	10.19	10.33	10.37	10.62	9.29
1912.....	10.89	12.22	12.89	12.91	12.53	11.69	10.64	9.80	9.39	9.37	9.96	9.00	10.87
1913.....	9.11	10.28	10.42	11.00	10.74	9.77	9.78	9.37	7.31	7.00	7.33	7.70	9.18
1914.....	7.99	8.07	8.17	8.06	7.87	7.96	8.12	8.76	9.10	8.24	8.02	8.12	8.21
1915.....	8.51	8.60	8.55	8.36	8.14	7.90	7.96	7.91	8.49	9.70	9.67	10.01	8.65
1916.....	10.27	10.47	10.76	10.58	9.98	9.47	9.15	9.12	8.65	8.54	9.20	9.40	9.63
1917.....	9.60	9.87	10.32	10.41	10.40	10.29	10.50	10.53	10.89	11.92	12.91	13.53	10.93
1918.....	14.48	16.46	17.49	17.80	16.56	15.88	14.71	15.20	16.61	19.01	20.03	20.67	17.08
1919.....	21.55	21.79	22.61	24.81	24.48	23.37	23.25	24.33	25.38	23.47	26.53	27.63	24.35
1920.....	28.06	31.21	31.88	32.23	29.84	26.21	25.52	19.97	17.77	13.18	11.64	10.28	23.15
1921.....	10.82	10.61	10.98	10.80	10.71	10.20	10.00	10.37	10.25	10.21	10.09	10.38	10.45

TABLE 160.—Timothy seed: Farm price per bushel, 15th of each month, 1910–1921.

Year.	Jan. 15.	Feb. 15.	Mar. 15.	Apr. 15.	May 15.	June 15.	July 15.	Aug. 15.	Sept. 15.	Oct. 15.	Nov. 15.	Dec. 15.	Yearly aver- age.
1910.....									\$1.77	\$4.03	\$4.08	\$4.11	.....
1911.....	\$4.12	\$4.51	\$4.93	\$5.17	\$5.24	\$5.24	\$5.48	\$6.52	6.65	6.91	6.90	6.72	\$5.70
1912.....	6.99	7.26	7.33	7.27	7.16	6.68	5.90	3.29	2.99	1.95	1.82	1.79	4.96
1913.....	1.79	1.78	1.72	1.71	1.76	1.77	1.94	2.01	2.13	2.02	2.08	2.10	1.90
1914.....	2.07	2.12	2.30	2.28	2.38	2.23	2.32	2.43	2.46	2.34	2.34	2.18	2.29
1915.....	2.63	2.66	2.78	2.69	2.75	2.65	2.57	2.56	2.62	2.72	2.91	2.86	2.70
1916.....	3.05	3.19	3.28	3.51	3.33	3.26	3.08	2.86	2.22	2.27	2.25	2.31	2.84
1917.....	2.44	2.46	2.70	2.76	3.09	3.09	3.04	3.23	3.31	3.61	3.25	3.37	3.03
1918.....	3.57	3.78	3.84	3.74	3.84	3.56	3.67	3.87	3.79	4.08	4.26	4.21	3.85
1919.....	4.34	4.51	4.54	4.69	5.05	4.63	4.49	4.58	4.55	4.78	4.67	4.98	4.65
1920.....	5.35	5.62	5.61	5.63	5.61	5.46	5.14	4.44	3.52	3.25	3.09	3.16	4.66
1921.....	3.01	2.75	2.97	2.84	2.90	2.99	2.98	2.71	2.31	2.70	2.41	2.57	2.79

TABLE 161.—Clover seed: Monthly and yearly receipts at Chicago, 1910–11 to 1921–22.¹

[In thousands of pounds—i. e., 600 omitted]

Season.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Crop-year total.
1910-11.....	1,340	1,375	865	231	94	524	751	378	364	465	50	270	6,656
1911-12.....	519	198	176	95	331	337	357	307	213	194	333	574	3,644
1912-13.....	271	950	521	295	493	545	901	279	109	165	41	40	4,610
1913-14.....	188	225	939	1,446	1,035	418	837	412	210	836	429	1,180	8,155
1914-15.....	789	595	1,136	1,723	1,773	1,993	909	438	55	.....	48	327	9,778
1915-16.....	2,190	1,921	1,953	1,266	950	1,236	1,123	974	294	.....	53	138	12,067
1916-17.....	1,356	1,308	995	1,416	660	1,192	833	798	393	307	2	602	9,862
1917-18.....	1,346	945	1,149	587	1,079	1,688	797	217	298	108	22	135	8,371
1918-19.....	192	1,597	1,337	1,146	1,974	1,002	1,175	464	88	.....	271	798	10,044
1919-20.....	1,539	1,816	1,941	1,606	2,840	2,557	2,239	884	7	200	195	213	16,037
1920-21.....	1,549	2,448	1,033	1,314	2,762	3,150	3,996	1,570	418	319	84	365	19,008
1921-22.....	739	1,235	2,010	2,064	.....	.....	.....	.....	.....	.....	.....	.....	.....
* 11-year average.	1,025	1,216	1,095	1,006	1,275	1,331	1,261	611	223	230	141	422	9,839

¹From Chicago Board of Trade and The Seed World

CLOVER AND TIMOTHY SEED—Continued.

TABLE 162.—*Clover seed: Monthly and yearly average spot price.*RED CLOVER SEED, PRIME CONTRACT GRADE, PER 100 POUNDS, CHICAGO,
1910-11 TO 1921-22.¹

Season.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Crop-year average.
1910-11.....	\$16.13	\$15.13	\$14.45	\$14.86	\$15.04	\$14.80	\$15.25	\$15.13	\$15.81	\$16.10	\$15.75	\$19.25	\$15.64
1911-12.....	20.10	20.63	20.63	20.75	21.81	23.13	22.50	21.63	20.55	20.13	20.60	16.00	20.66
1912-13.....	17.56	18.38	18.05	18.88	19.90	19.88	19.25	21.38	18.40	16.00	15.50	14.70	18.16
1913-14.....	11.00	13.35	13.96	14.88	14.75	14.46	14.04	13.00	13.00	13.50	14.15	17.81	13.99
1914-15.....	17.19	15.08	15.00	15.59	15.84	15.29	14.30	13.80	13.50	13.50	13.50	15.19	14.82
1915-16.....	15.40	21.05	20.05	20.72	19.59	21.19	18.00	16.69	16.00	14.69	14.00	15.63	17.99
1916-17.....	14.85	16.00	17.50	17.91	18.19	19.38	18.81	17.90	18.33	18.35	19.08	20.33	18.06
1917-18.....	22.36	25.16	26.81	27.45	31.40	34.35	33.72	32.15	30.51	30.45	.....	.....	29.44
1918-19.....	35.00	35.50	36.00	37.50	42.60	42.60	51.60	50.00	46.60	45.89	49.10	50.00	43.53
1919-20.....	50.00	53.10	51.20	52.00	54.23	55.73	54.22	44.93	35.00	35.05	35.00	29.85	45.86
1920-21.....	26.58	22.28	21.67	20.00	21.52	18.55	18.19	17.55	19.00	19.00	19.00	19.00	20.22
1921-22.....	18.01	18.32	18.50	18.50	.....	.....	.....	.....	.....	.....	.....	.....	.....
11-year average.	22.05	23.24	23.21	23.69	24.99	25.40	25.44	24.04	22.43	22.04	21.51	21.78	23.49

ALSIKE CLOVER SEED PER BUSHEL, TOLEDO, 1914-15 TO 1921-22.²

1914-15.....	.....	.....	.....	.....	.....	\$8.96	\$8.59	\$8.17	\$8.05	\$7.90	\$8.52	\$9.13	.....
1915-16.....	\$9.59	\$10.27	\$10.35	\$10.33	\$10.26	10.07	9.40	9.15	9.10	9.48	9.53	9.88	\$9.78
1916-17.....	9.83	10.24	10.72	11.10	11.30	11.62	11.51	11.56	11.50	11.40	11.62	11.74	11.18
1917-18.....	12.57	13.34	14.35	14.40	15.31	.....	15.59	15.31	15.22	12.37	.....	.....	14.28
1918-19.....	.....	18.17	.....	19.66	18.70	16.92	20.09	25.41	.....	.....	24.23	25.60	21.02
1919-20.....	25.30	28.72	29.97	31.47	34.57	35.17	35.71	30.89	24.37	25.52	23.95	19.24	28.74
1920-21.....	16.84	17.35	17.70	16.95	16.00	15.34	14.98	13.93	13.50	12.43	10.82	10.71	14.71
1921-22.....	10.62	10.72	10.64	11.05	.....	.....	.....	.....	.....	.....	.....	.....	.....
6-year average..	14.83	16.35	16.62	17.33	17.69	17.82	17.88	17.71	14.74	14.24	16.03	15.31	16.62

¹ From Chicago Board of Trade and The Seed World.² Compiled from The Seed World.³ Price based on very few sales.⁴ Five-year average.TABLE 163.—*Timothy seed: Monthly and yearly average spot price per 100 pounds, prime contract grade, Chicago, 1910-11 to 1921-22.¹*

Season.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Crop year average.
1910-11.....	\$6.36	\$9.45	\$9.32	\$9.64	\$9.97	\$10.41	\$11.40	\$12.03	\$12.00	\$12.06	\$11.55	\$13.50	\$10.64
1911-12.....	14.31	15.20	15.81	16.00	16.45	16.25	16.25	15.60	14.50	13.70	11.63	10.25	14.66
1912-13.....	6.13	4.81	4.44	4.05	4.13	4.13	3.88	3.76	3.88	4.16	4.69	5.28	4.45
1913-14.....	5.59	5.58	5.51	5.41	5.56	5.53	5.45	5.19	5.30	5.47	5.63	5.87	5.51
1914-15.....	6.31	6.34	5.64	5.48	6.61	7.89	7.45	7.35	8.84	6.88	7.25	7.40	6.95
1915-16.....	8.19	9.19	8.35	8.46	8.78	8.70	8.75	8.55	8.50	8.94	9.29	8.75	8.69
1916-17.....	7.00	4.99	5.43	5.50	5.74	5.55	5.55	5.78	6.81	8.20	8.14	8.01	6.39
1917-18.....	8.25	8.44	8.56	7.82	7.63	8.25	8.94	8.55	8.25	8.41	7.81	8.88	8.32
1918-19.....	8.90	10.00	10.00	10.30	11.00	11.00	10.00	10.50	11.00	12.00	12.00	12.00	10.73
1919-20.....	11.75	11.50	11.25	11.50	12.25	13.62	14.30	13.07	11.76	12.00	12.00	11.85	12.24
1920-21.....	8.89	7.50	6.71	6.69	6.13	5.78	5.05	4.65	5.04	5.30	5.27	5.07	6.01
1921-22.....	4.50	4.30	4.85	5.31	5.53	.....	.....	.....	.....	.....	.....	.....	.....
11-year average.	8.33	8.45	8.27	8.26	8.56	8.83	8.82	8.64	8.72	8.82	8.65	8.81	8.60

¹ From Chicago Board of Trade and The Seed World.

CLOVER AND TIMOTHY SEED—Continued.

TABLE 164.—*Timothy seed: Monthly and yearly receipts at Chicago, 1910-11 to 1921-22.*¹
[In thousands of pounds—i. e., 000 omitted.]

Season.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Crop year total.
1910-11.....	1,578	7,509	3,778	1,741	1,563	1,311	1,560	1,205	368	106	55	87	21,161
1911-12.....	4,451	5,829	4,011	2,649	1,120	792	79	808	557	388	242	158	21,944
1912-13.....	2,916	6,875	5,505	3,608	2,182	2,361	3,019	2,831	3,964	1,509	1,764	2,647	39,181
1913-14.....	3,601	5,947	4,232	3,421	2,131	2,191	1,763	4,393	1,977	828	1,446	2,410	34,340
1914-15.....	4,914	11,208	3,469	2,650	3,487	3,050	3,087	4,129	1,165	1,101	403	752	39,415
1915-16.....	1,201	9,894	5,578	4,063	2,416	1,431	2,233	2,167	1,019	1,039	704	256	31,937
1916-17.....	2,487	10,565	5,631	3,989	3,051	2,149	2,478	6,279	3,367	2,442	1,117	924	44,479
1917-18.....	3,810	6,525	5,172	2,966	1,915	2,006	2,242	2,554	1,434	1,250	392	677	30,943
1918-19.....	764	3,198	5,175	3,242	1,463	1,578	2,234	2,985	3,772	2,398	1,248	891	29,048
1919-20.....	7,450	13,191	6,124	2,582	1,643	3,186	3,381	3,118	1,338	1,093	641	1,135	44,882
1920-21.....	3,313	12,777	9,013	5,269	3,445	2,343	3,386	4,056	2,601	2,368	1,249	531	50,331
1921-22.....	10,849	6,269	4,586	3,197	2,669	.....	.....	.....	.....	.....	.....	.....	.....
11-year average.	3,344	8,502	5,244	3,287	2,220	2,036	2,385	3,144	1,960	1,320	851	955	35,243

¹ From Chicago Board of Trade and The Seed World.

ALFALFA SEED.

TABLE 165.—*Alfalfa seed: Farm price per bushel, 15th of each month, 1912-1921.*

Year.	Jan. 15.	Feb. 15.	Mar. 15.	Apr. 15.	May 15.	June 15.	July 15.	Aug. 15.	Sept. 15.	Oct. 15.	Nov. 15.	Dec. 15.	Yearly average.
1912.....	.....	.....	.....	.....	.....	\$8.47	\$8.32	\$8.58	\$9.02	\$7.87	\$8.28	\$7.86	\$8.34
1913.....	\$7.66	\$8.15	\$8.19	\$8.36	\$8.21	8.08	8.20	7.96	7.42	6.96	6.36	6.60	7.08
1914.....	6.55	6.48	6.60	6.77	6.77	6.83	6.92	6.81	7.21	7.29	7.29	7.57	6.92
1915.....	7.61	7.86	7.92	8.45	7.01	8.31	8.51	8.30	7.91	8.37	8.65	8.88	8.15
1916.....	8.84	9.20	10.02	10.39	10.70	10.10	10.30	9.33	9.27	8.61	8.30	8.56	9.17
1917.....	7.97	7.75	8.53	9.03	8.85	8.61	8.71	8.69	9.04	9.04	9.43	9.58	8.77
1918.....	10.14	9.90	10.60	10.53	10.09	10.13	9.67	9.88	10.04	9.91	9.38	9.65	9.99
1919.....	10.07	10.48	10.64	11.18	12.13	11.79	10.88	11.34	12.34	14.90	15.23	16.68	12.30
1920.....	16.60	19.57	21.43	21.80	22.40	20.42	19.41	16.03	14.89	13.35	12.25	10.24	17.37
1921.....	9.95	9.01	9.81	8.71	8.97	8.73	7.89	8.54	8.53	8.33	8.09	7.63	8.64

TABLE 166.—*Alfalfa seed: Monthly and yearly average spot price per 100 pounds, Kansas City, 1910-11 to 1921-22.*¹

Season.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Crop-year average.
1910-11.....	(³)	(²)	\$13.34	\$12.88	\$12.88	\$12.88	\$12.88	\$12.88	\$12.88	(²)	(²)	(²)	\$12.95
1911-12.....	(³)	(²)	11.50	10.48	10.00	10.17	11.03	10.90	10.91	\$10.45	\$10.25	\$10.41	10.61
1912-13.....	\$10.50	\$10.27	9.84	9.64	10.00	10.00	9.90	9.51	9.88	10.09	10.25	11.71	10.16
1913-14.....	10.00	9.57	9.25	8.12	7.70	7.75	8.00	8.00	8.00	8.42	9.35	9.50	8.56
1914-15.....	9.50	10.20	11.88	10.34	10.00	10.87	11.87	13.15	13.11	12.53	12.25	12.23	11.45
1915-16.....	(²)	14.17	14.98	15.69	15.57	16.08	17.40	16.23	17.25	17.25	17.25	16.28	16.28
1916-17.....	17.81	17.58	12.63	11.23	10.50	10.66	10.62	11.00	11.00	11.18	11.80	12.00	12.38
1917-18.....	12.60	12.52	13.25	13.51	14.00	14.00	13.50	13.50	13.50	14.88	15.00	12.42	15.47
1918-19.....	12.90	13.91	13.02	13.12	13.45	13.81	13.58	13.75	13.75	13.04	14.27	14.21	13.53
1919-20.....	14.50	17.70	20.00	23.50	27.72	30.00	30.00	33.77	20.73	25.00	25.00	25.00	21.11
1920-21.....	25.00	25.00	14.79	11.67	12.50	14.00	15.00	14.62	13.25	13.75	13.25	12.75	15.72
1921-22.....	12.75	12.75	12.12	11.50	11.50	11.00	.....	.....	.....	.....	.....	.....	.....
11-year average.	14.03	14.55	13.04	13.02	13.12	13.57	13.98	14.33	13.11	13.61	13.87	13.75	13.59

¹ Compiled from Kansas City Price Current and The Seed World.² No quotations.

COTTON.

TABLE 167.—Cotton: Area and production in undermentioned countries, 1909–1920.

[Bales of 475 pounds net.]

Country.	Area (acres).				Production (bales).			
	Average 1909–1913 ¹	1918	1919	1920	Average 1909–1913 ¹	1918	1919	1920
NORTH AMERICA.								
United States ²	35,805,667	36,008,000	33,566,000	35,878,000	13,033,137	12,040,532	11,421,000	13,440,000
Porto Rico.....				2,000	396	443		460
St. Croix.....					510			
West Indies:								
British—								
Barbadoes.....	4,227		1,179	1,200	1,211			
Grenada ⁴		3,190		3,200	688	462	649	774
Jamaica ⁴					66			
Leeward Islands.....					2,254			
St. Lucia ⁴					15			
St. Vincent.....				8,000	903	768	920	1,137
Dominican Republic.....					1,140			
Mexico.....	245,474	425,939			201,541	203,608	199,000	188,000
SOUTH AMERICA.								
Argentina.....	5,356	33,000	33,000	59,000	2,646	16,000	16,000	28,000
Brazil.....		605,000	685,000	805,000	290,400	339,090	354,000	451,000
Peru.....		158,218			87,120	129,140	155,000	164,000
EUROPE.								
Bulgaria.....	1,829	7,334	2,500	4,100	871	762	711	1,255
Malta.....	1,095	744	818	600	433	268	332	293
ASIA.								
British India.....	22,079,686	20,997,000	23,353,000	21,341,000	3,511,684	3,324,000	4,850,000	3,013,660
Ceylon.....	558				634			
Cyprus.....				9,000	1,983	838	2,486	2,024
Dutch East Indies.....					15,121			
Indo China.....		43,242			11,689	8,000		6,000
Japanese Empire:								
Japan.....	6,590	6,563	6,000	6,000	4,704	3,900	4,000	4,260
Chosen.....	131,104	319,604	356,407	358,782	38,037	68,000	87,000	101,000
Russia:								
Transcaucasia.....	252,637	70,000			79,885			115,000
Central Asia.....	1,123,433				658,039			
Siam.....					5,396			
AFRICA.								
British Africa:								
Nyasaland and Rhodesia.....	23,534	28,041	18,597	22,000	4,400	2,106	1,800	2,900
East Africa.....					435	167	84	84
Gold Coast.....					34	83		
Nigeria (North-ern).....					1,004	2,500	6,700	4,600
Nigeria (South-ern, incl. Lagos).....					8,045	2,600	8,000	9,000
Uganda.....		145,000	160,000	200,000	17,613	30,569	48,514	62,761
Union of South Africa.....		7,600			94	1,666	2,968	2,000
Egypt.....	1,783,911	1,366,000	1,633,540	1,898,000	1,451,621	999,000	1,155,000	1,251,000
French Africa:								
Dahomey ⁴					629	1,600		
Guinea.....					230	43		
Ivory Coast ⁴					84	700		
German Africa:								
East Africa.....					5,807			
Togo.....					2,350			
Italian Africa:								
Eritrea.....					942			
Sudan (Anglo Egyptian).....					13,342	10,000	10,300	18,400
OCEANIA.								
British Oceania:								
Fiji.....	16				4			
Queensland.....	523				91			
Solomon Islands.....					22			

¹ Five-year average except in a few cases where five-year statistics were unavailable.² Linters not included, quantity produced 1918, 929,516 bales; 1919, 607,969 bales; 1920, 440,313 bales.³ Shipments to United States plus exports to foreign countries.⁴ Unofficial.⁵ Exports.⁶ Old boundaries.

COTTON—Continued.

TABLE 168.—Cotton: World production so far as reported, 1900–1920.

[In bales of 478 pounds net weight.]

Year.	Production.	Year.	Production.	Year.	Production.	Year.	Production.
1900.....	15,893,591	1906.....	22,133,148	1912.....	19,578,095	1918.....	17,188,107
1901.....	15,926,048	1907.....	18,328,613	1913.....	21,271,902	1919.....	18,349,464
1902.....	17,331,503	1908.....	23,688,292	1914.....	23,804,422	1920.....	18,866,908
1903.....	17,278,881	1909.....	20,679,334	1915.....	17,659,126		
1904.....	21,005,175	1910.....	22,433,260	1916.....	18,008,804		
1905.....	18,342,075	1911.....	21,754,810	1917.....	16,323,395		

TABLE 169.—Cotton: Acreage, production, value, exports, etc., in the United States, 1866–1921.

Year.	Acreage (000 omit- ted).	Average yield per acre.	Produc- tion (000 omit- ted).	Average farm price per pound Dec. 1.	Farm value Dec. 1 (000 omitted).	New York closing prices per pound, on middling upland.				Domestic exports, fiscal year be- ginning July 1.	Im- ports, fiscal year be- ginning July 1.
						December.		May of fol- lowing year.			
						Low.	High.	Low.	High.		
1896-1875.....	<i>Acres.</i> 8,810	<i>Pounds.</i> 176.2	<i>Bales.</i> 3,250	<i>Cents.</i>	<i>Dollars.</i>	<i>Cents.</i> 19½	<i>Cents.</i> 20½	<i>Cents.</i> 21½	<i>Cents.</i> 22½	<i>Bales.</i> ¹ 2,151,216	<i>Bales.</i> ¹ 4,507
1876-1885.....	15,209	170.7	5,652	9.1	243,808	10½	11½	10½	11½	3,707,071	8,462
1886-1895.....	19,421	176.9	7,637	7.7	260,415	8½	9	8½	9½	5,176,306	50,266
1896.....	23,273	184.9	8,533	6.7	286,169	7½	7½	7½	7½	6,207,510	103,798
1897.....	24,320	182.7	10,898	6.7	296,816	5½	5½	6½	6½	7,725,572	105,321
1898.....	24,967	220.6	11,189	5.7	315,449	5½	5½	6½	6½	7,575,438	100,316
1899.....	24,327	183.8	9,315	7.0	326,215	7½	7½	9	9½	6,252,451	134,797
1900.....	24,933	194.4	10,123	9.2	463,310	9½	10½	8½	8½	6,718,125	93,263
1901.....	26,774	170.0	9,510	7.0	334,088	8	8½	9½	9½	7,057,919	197,431
1902.....	27,175	187.3	10,631	7.6	403,718	8½	8½	10.75	12.15	7,138,284	149,749
1903.....	27,052	174.3	9,851	10.5	516,763	11.95	14.10	12.75	13.90	6,179,712	97,681
1904.....	31,215	205.9	13,438	9.0	603,433	6.85	9.00	7.85	8.85	8,678,644	121,017
1905.....	27,110	186.6	10,575	10.8	569,791	11.65	12.60	11.25	12.00	7,268,090	141,927
1906.....	31,374	202.5	13,274	9.6	635,534	10.45	11.25	11.50	12.90	9,036,434	209,584
1907.....	29,660	179.1	11,107	10.4	575,226	11.70	12.20	10.20	11.50	7,633,997	142,146
1908.....	32,444	194.9	13,242	8.7	575,092	9.10	9.35	10.85	11.80	8,895,970	173,036
1909.....	30,938	154.3	10,003	13.9	607,681	14.65	16.15	14.50	16.05	6,413,416	172,075
1910.....	32,403	170.7	11,609	14.1	820,407	14.80	15.25	15.35	16.15	8,067,882	227,537
1911.....	36,045	207.7	15,693	8.8	687,888	9.20	9.65	11.30	11.90	11,070,251	219,560
1912.....	34,283	190.9	13,703	11.9	817,055	12.75	13.20	11.80	12.10	9,124,591	243,704
1913.....	37,089	182.0	14,156	12.2	862,708	12.50	13.50	12.90	14.50	9,521,881	246,694
1914.....	36,832	209.2	16,135	6.8	549,036	7.25	7.80	9.50	10.40	8,807,157	370,409
1915.....	31,412	170.3	11,192	11.3	631,460	11.95	12.75	12.30	13.35	6,168,140	465,602
1916.....	34,985	156.6	11,450	19.6	1,122,295	16.20	20.30	19.60	22.10	6,176,162	294,123
1917.....	33,841	159.7	11,302	27.7	1,566,198	29.85	31.85	25.70	30.10	4,641,023	206,651
1918.....	36,008	159.6	12,041	27.6	1,663,633	27.50	33.00	25.90	34.00	5,525,804	207,184
1919.....	33,566	161.5	11,421	35.6	2,034,658	38.00	40.25	40.00	43.00	7,037,487	690,628
1920.....	35,878	178.4	13,440	13.9	933,658	14.50	16.70	12.45	13.15	5,622,891	251,878
1921.....	30,509	124.5	7,954	16.2	643,933	17.50	19.45	18.95	21.80	.....	.....

¹ Bales of 500 pounds gross weight.

COTTON—Continued.

TABLE 170.—Cotton: Acreage harvested, by States, 1912–1921.

[Thousands of acres.]

State.	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921
Virginia.....	47	47	45	34	42	50	44	42	42	34
North Carolina.....	1,545	1,576	1,527	1,282	1,451	1,515	1,600	1,490	1,587	1,403
South Carolina.....	2,695	2,790	2,861	2,516	2,780	2,837	3,001	2,835	2,964	2,571
Georgia.....	5,335	5,318	5,433	4,825	5,277	5,195	5,341	5,220	4,900	4,172
Florida.....	224	188	221	193	191	183	167	103	100	65
Alabama.....	3,730	3,760	4,007	3,340	3,225	1,977	2,570	2,791	2,853	2,235
Mississippi.....	2,889	3,067	3,054	2,735	3,110	2,788	3,138	2,848	2,950	2,628
Louisiana.....	929	1,244	1,299	990	1,250	1,454	1,683	1,527	1,470	1,168
Texas.....	11,333	12,597	11,931	10,510	11,400	11,092	11,233	10,476	11,598	10,745
Arkansas.....	1,991	2,502	2,480	2,170	2,600	2,740	2,991	2,725	2,980	2,382
Tennessee.....	783	865	915	772	887	882	902	758	840	634
Missouri.....	103	112	145	96	133	153	148	125	136	103
Oklahoma.....	2,665	3,009	2,847	1,895	2,562	2,783	2,998	2,424	2,749	2,206
California ¹	9	14	47	39	52	136	173	185	275	140
Arizona.....						41	95	107	230	90
All other.....			20	15	25	15	12	10	24	18
United States.....	34,283	37,089	36,882	31,412	34,985	33,841	36,003	33,566	35,878	30,509

¹ Lower California (85,000 acres in 1921, 125,000 in 1920, 100,000 in 1919, and 88,000 in 1918) included in California figures but excluded from United States totals.

TABLE 171.—Cotton: Production of lint (excluding linters) in 500-pound gross weight bales, by States, 1912 to 1921.

[Thousands of bales, as finally reported by U. S. Bureau of the Census.]

State.	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921
Virginia.....	24	23	25	16	27	19	25	23	22	17
North Carolina.....	866	792	931	699	655	618	893	830	925	776
South Carolina.....	1,182	1,378	1,534	1,134	932	1,237	1,570	1,426	1,623	755
Georgia.....	1,777	2,317	2,718	1,909	1,821	1,884	2,122	1,660	1,415	787
Florida.....	53	59	81	48	41	38	29	16	18	11
Alabama.....	1,342	1,495	1,751	1,021	533	518	801	713	663	580
Mississippi.....	1,046	1,311	1,246	954	812	905	1,226	961	895	813
Louisiana.....	376	444	449	341	443	639	588	298	388	279
Texas.....	4,880	3,945	4,592	3,227	3,726	3,125	2,697	3,099	4,345	2,198
Arkansas.....	792	1,073	1,016	816	1,134	974	987	884	1,215	797
Tennessee.....	277	379	384	303	382	240	330	310	325	302
Missouri.....	56	67	82	43	63	61	62	64	79	70
Oklahoma.....	1,021	840	1,262	640	823	959	577	1,016	1,336	431
California.....	8	23	50	29	44	53	67	56	75	34
Arizona.....						22	56	60	103	45
All other.....	3	10	14	7	14	5	6	5	13	9
United States.....	13,703	14,156	16,135	11,192	11,450	11,302	12,041	11,421	13,440	7,954

TABLE 172.—Cotton: Condition of crop, United States, monthly, 1900–1921.

[Prior to 1901 figures of condition relate to first month following dates indicated.]

Year.	May 25.	June 25.	July 25.	Aug. 25.	Sept. 25.	Year.	May 25.	June 25.	July 25.	Aug. 25.	Sept. 25.
1900.....	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	1911.....	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
1901.....	82.5	75.8	76.0	68.2	67.0	1912.....	87.8	88.2	89.1	73.2	71.1
1902.....	81.5	81.1	77.2	71.4	61.4	1913.....	78.9	80.4	76.5	74.8	69.6
1903.....	95.1	84.7	81.9	64.0	53.3	1914.....	79.1	81.8	79.6	68.2	64.1
1904.....	74.1	77.1	79.7	81.2	65.1	1915.....	74.3	79.6	76.4	78.0	73.5
1905.....	83.0	88.0	91.6	84.1	75.8	1916.....	80.0	80.2	75.4	69.2	60.3
1906.....	77.2	77.0	74.9	72.1	71.2	1917.....	77.5	81.1	72.3	61.2	56.3
1907.....	84.6	83.3	82.9	77.3	71.6	1918.....	69.5	70.3	70.3	67.8	60.4
1908.....	70.5	72.0	75.0	72.7	67.7	1919.....	82.3	85.8	73.6	55.7	54.4
1909.....	79.7	81.2	83.0	76.1	69.7	1920.....	75.6	70.0	67.1	61.4	54.4
1910.....	81.1	74.6	71.9	63.7	58.5	1921.....	62.4	70.7	74.1	67.5	59.1
	82.0	80.7	75.5	72.1	65.9		66.0	69.2	64.7	49.3	42.2

COTTON—Continued.

TABLE 173.—Cotton: Forecasts of production, monthly, with preliminary and final estimates.

[000 omitted.]

Year.	July.	August.	September.	October.	December production estimate.	Final estimate (census).
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
1915.....	12,381	11,876	11,697	10,950	11,161	11,192
1916.....	14,266	12,916	11,800	11,637	11,511	11,450
1917.....	11,633	11,949	12,499	12,047	10,949	11,302
1918.....	15,327	13,619	11,137	11,818	11,700	12,041
1919.....	10,986	11,016	11,230	10,696	11,030	11,421
1920.....	11,450	12,519	12,783	12,123	12,987	13,440
1921.....	8,433	8,203	7,037	6,537	8,340	7,954

TABLE 174.—Cotton: Yield per acre, price per pound December 1, and value per acre, by States.

State.	Yield per acre (pounds of lint).					Farm price per pound (cents).										Value per acre (dollars). ¹			
	5-year aver- age 1917-1921.	1917	1918	1919	1920	1921	10-year aver- age 1912-1921.	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	5-year aver- age 1910-1920.	1921.
Va.....	233	180	270	255	230	230	18.4	12.0	13.1	7.3	11.4	19.4	27.8	26.5	35.0	15.0	16.4	61.10	37.72
N. C.....	253	194	268	266	275	264	18.2	12.2	12.6	6.9	11.2	19.4	27.7	26.4	35.2	14.5	16.4	59.94	33.30
S. C.....	220	208	250	240	260	140	18.5	12.4	12.7	6.9	11.3	19.6	28.4	27.6	35.7	14.5	16.0	56.56	22.40
Ga.....	149	173	190	152	138	90	18.7	12.4	12.8	6.9	11.4	19.9	28.8	27.5	35.8	15.3	16.6	42.09	14.94
Fla.....	85	100	85	74	86	80	26.1	15.7	17.0	12.2	14.8	31.0	50.0	43.0	42.0	17.0	18.0	33.06	14.40
Ala.....	126	125	149	122	111	124	18.3	12.1	12.7	6.7	11.1	19.5	28.0	27.0	34.8	15.0	16.0	29.95	19.84
Miss.....	159	155	187	160	145	145	18.9	12.3	12.6	6.8	11.5	20.5	28.5	27.8	37.5	15.3	16.6	40.79	24.57
La.....	142	210	167	93	126	114	17.9	11.5	11.7	6.9	11.2	19.9	28.7	27.7	35.0	14.2	15.0	36.98	17.10
Tex.....	132	135	115	140	174	98	18.0	11.5	11.5	6.8	11.1	19.4	28.7	28.2	35.0	13.2	16.1	34.18	15.78
Ark.....	108	170	158	155	195	160	18.4	12.3	11.6	6.6	11.6	19.6	28.2	27.8	36.4	13.3	16.1	43.04	25.76
Tenn.....	183	130	175	195	185	228	17.9	12.4	12.7	6.4	11.3	19.5	27.7	26.7	33.5	13.0	16.0	42.35	36.48
Mo.....	249	190	200	257	275	325	17.6	11.3	11.5	6.5	11.0	19.0	27.5	27.0	34.0	13.5	15.0	54.70	43.75
Okla.....	157	165	92	195	230	104	17.3	11.3	11.4	6.5	11.3	19.0	26.5	25.5	35.2	10.5	15.4	37.85	16.02
Calif.....	261	242	270	268	266	253	21.2	12.5	13.0	7.0	11.2	20.0	28.0	30.0	43.0	30.0	17.0	84.70	43.86
Ariz.....	260	285	280	270	224	242	39.0	.....	.....	.....	.....	.....	.....	48.0	51.0	30.0	27.0	104.56	65.34
U. S.....	158.7	159.7	159.6	161.5	178.4	124.5	18.3	11.9	12.2	6.8	11.3	19.6	27.7	27.6	35.6	13.9	16.2	42.24	21.11

¹ Based upon farm price Dec. 1.

TABLE 175.—Cotton: Farm price, cents per pound on 1st of each month, 1908-1921.

Year.	Jan. 1.	Feb. 1.	Mar. 1.	Apr. 1.	May 1.	June 1.	July 1.	Aug. 1.	Sept. 1.	Oct. 1.	Nov. 1.	Dec. 1.	Yearly aver.
1908.....	10.7	10.8	11.0	10.2	9.6	10.6	10.9	10.3	9.4	9.0	8.7	8.7	9.6
1909.....	8.4	9.0	9.0	9.1	9.6	10.1	10.3	11.3	11.7	12.6	13.7	13.9	11.6
1910.....	14.6	14.0	14.0	14.1	14.0	14.2	13.9	14.3	14.4	13.8	14.0	14.1	14.0
1911.....	14.4	14.3	13.9	13.9	14.2	14.6	14.4	13.2	11.8	10.2	8.9	8.8	11.4
1912.....	8.4	9.0	9.8	10.1	10.9	11.0	11.2	12.0	11.3	11.2	10.9	11.9	10.5
1913.....	12.2	11.9	11.8	11.8	11.6	11.5	11.6	11.5	11.8	13.3	13.0	12.2	12.4
1914.....	11.7	11.9	12.6	11.9	12.2	12.4	12.4	12.5	8.7	7.8	6.3	6.8	9.1
1915.....	6.6	7.4	7.4	8.1	9.1	8.6	8.6	8.1	8.5	11.2	11.6	11.3	9.7
1916.....	11.4	11.5	11.1	11.5	11.5	12.2	12.5	12.6	14.6	15.5	18.0	19.6	15.1
1917.....	17.1	16.8	15.9	18.0	18.9	20.2	24.7	24.3	23.4	23.3	27.3	27.7	22.7
1918.....	28.9	29.7	30.2	31.8	28.5	27.4	28.6	27.8	32.2	31.8	20.3	27.6	29.4
1919.....	28.7	24.9	24.0	24.5	26.0	28.5	31.1	32.5	30.3	31.3	30.3	35.6	31.3
1920.....	35.9	36.2	36.2	37.3	37.7	37.2	37.4	36.8	31.1	25.5	19.4	13.9	26.6
1921.....	11.5	11.8	10.3	9.4	9.4	9.8	9.6	9.8	12.6	19.8	17.7	16.2	14.7
Average 1912-1921.	17.2	17.1	16.9	17.4	17.6	18.0	18.8	18.8	18.4	19.1	19.0	18.3	18.2

COTTON—Continued.

TABLE 176.—Cotton: *Extent and causes of yearly crop losses, 1909-1920.*

Year.	Deficient moisture.	Excessive moisture.	Floods.	Frost or freeze.	Hail.	Hot winds.	Storms.	Total climatic.	Plant disease.	Insect pests.	Animal pests.	Defective seed.	Total.
	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
1920.....	2.2	8.8	0.8	0.8	0.2	0.1	0.2	13.1	1.2	23.9	0.2	0.2	39.0
1919.....	2.7	15.3	1.6	.3	.2	.4	.5	21.2	1.4	18.8	(1)	.2	41.9
1918.....	23.8	9	.8	.6	1	2.8	.3	29.2	2.0	7.9	(1)	.1	40.3
1917.....	15.1	1.7	.5	6.0	1.0	.7	.2	25.5	1.3	12.8	(1)	.1	39.9
1916.....	9.2	9.1	3.1	.4	.7	.6	2.0	25.2	.9	15.7	(1)	.1	42.4
1915.....	6.8	5.7	1.9	.6	.7	1.1	2.0	19.3	1.9	12.2	(1)	.1	36.8
1914.....	7.9	2.9	.5	.9	.4	.6	.1	13.8	.2	9.8	(1)	.2	25.4
1913.....	15.2	2.0	.8	1.1	.4	2.4	.5	23.1	.5	8.9	(1)	.4	33.7
1912.....	8.1	7.6	1.2	1.0	.6	1.2	.2	20.7	4.3	6.5	0.1	.3	32.7
1911.....	9.8	2.6	(1)	.3	.1	1.6	.3	15.4	.4	7.9	(1)	.2	26.1
1910.....	12.2	5.1	.9	2.1	.3	1.6	.1	22.6	.4	7.5	(1)	.3	35.6
1909.....	14.9	6.0	1.1	1.0	.6	3.0	1.4	28.6	4.2	7.9	(1)	.1	42.0
Average.....	10.7	5.6	1.1	1.3	.4	1.3	.6	21.5	1.6	11.6	(1)	.2	36.3

¹ Less than 0.05 per cent.

TABLE 177.—Cotton: *Percentage of loss due to boll weevil (averages of estimates of crop reporters).*

[100=normal crop.]

State.	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909
South Carolina..	13.26	3.00	0.07	0.01	0.02	0.02	.....	0.10	.....	.....	.....	.....
Georgia.....	30.56	19.38	10.73	9.06	3.44	.28	.....	0.10	.....	.....	.....	.....
Florida.....	32.10	40.46	23.85	27.07	20.98	13.14	.....	11.80	0.30	.....	.....	.....
Tennessee.....	.57	.17	.37	1.74	1.23	.04	0.08	.10	.....	.....	.....	.....
Alabama.....	36.03	28.77	12.14	23.88	27.91	16.16	6.02	4.80	1.50	0.20	0.05	0.10
Mississippi.....	32.25	19.50	10.41	22.22	31.73	24.08	24.14	33.90	18.00	5.10	14.06	4.20
Louisiana.....	23.99	24.84	9.79	11.89	24.81	19.85	17.66	25.10	13.70	11.40	40.30	41.70
Texas.....	19.90	13.96	4.43	7.26	18.53	16.28	7.86	6.80	2.50	.90	6.52	12.10
Oklahoma.....	8.81	1.48	1.30	4.35	3.70	2.70	.79	.40	.50	.20	1.27	3.00
Arkansas.....	9.41	4.79	3.14	8.96	7.49	4.60	2.93	2.80	2.40	2.00	7.73	6.10
U. S. weighted average.....	19.95	13.20	5.88	9.34	13.36	9.93	5.91	6.69	3.26	1.28	5.30	6.13

TABLE 178.—Cotton: *Average closing prices, New York, cents per pound, for future delivery, 1920-21.¹*

During—	Delivery in—											
	Aug.	Sept.	Oct.	Nov. ²	Dec.	Jan.	Feb. ²	Mar.	Apr. ²	May.	June. ²	July.
1920												
August.....	32.10	30.55	29.61	29.13	28.38	27.53	27.43	27.24	27.04	26.91	26.82	26.68
September.....	.....	28.44	27.09	25.67	24.84	23.86	23.66	23.29	23.16	22.86	22.75	22.65
October.....	19.38	19.04	21.36	20.84	20.71	20.28	20.20	20.10	20.02	19.90	19.78	19.68
November.....	16.99	16.90	16.79	18.45	17.88	17.63	17.46	17.41	17.37	17.31	17.20	17.09
December.....	15.31	15.39	15.33	14.44	15.39	15.22	15.15	15.12	15.16	15.25	15.25	15.32
1921												
January.....	15.44	15.52	15.52	15.52	15.59	16.71	15.20	15.17	15.20	15.25	15.32	15.43
February.....	14.08	14.23	14.35	14.44	14.54	14.60	13.32	13.11	13.33	13.56	13.74	13.95
March.....	12.52	12.62	12.83	12.93	13.06	13.13	13.74	11.25	11.62	11.89	12.08	12.34
April.....	12.69	12.88	13.06	13.25	13.44	13.61	13.71	13.83	11.67	11.55	12.21	12.49
May.....	13.15	13.38	13.57	13.75	13.93	14.03	14.18	14.33	.....	12.55	12.66	12.92
June.....	12.13	12.39	12.64	12.88	13.16	13.22	13.37	13.52	13.64	13.79	11.83	11.83
July.....	12.12	12.40	12.62	12.82	13.05	13.06	13.18	13.35	13.39	13.46	13.51	12.16
Crop-year average...	15.99	16.98	17.06	17.01	17.00	17.06	16.72	16.48	16.51	16.19	16.10	16.04
August.....	12.32	13.57	13.77	13.98	14.17	14.18	14.27	14.38	14.42	14.47	14.50	14.69
September.....	18.85	19.04	19.54	19.61	19.79	19.68	19.58	19.58	19.47	19.41	19.26	19.12
October.....	17.61	17.29	19.21	19.13	19.19	18.94	18.86	18.77	18.59	18.56	18.14	17.90
November.....	16.53	16.23	15.94	17.39	17.61	17.45	17.44	17.41	17.28	17.19	16.99	16.76
December.....	16.82	16.59	16.35	.....	17.77	17.86	17.83	17.81	17.63	17.49	17.27	17.09

¹ Compiled from New York Cotton Exchange Reports.

² Nominal prices.

COTTON—Continued.

TABLE 179.—Cotton, middling: Monthly and yearly average spot price, cents per pound.

[Compiled from daily reports, Bureau of Markets and Crop Estimates.]

NORFOLK.

Crop year.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Yearly average.
1914-15.....							7.89	8.33	9.38	9.12	8.97	8.43	.....
1915-16.....	8.77	10.30	11.87	11.39	11.76	11.92	11.53	11.63	11.76	12.61	12.83	13.04	11.62
1916-17.....	14.82	15.39	17.40	19.37	17.87	17.50	16.54	18.41	19.73	20.09	24.33	23.21	18.85
1917-18.....	25.33	21.92	26.99	28.35	29.18	30.47	30.36	32.42	32.99	29.26	28.95	29.59	28.82
1918-19.....	31.51	33.28	30.23	27.59	27.83	26.23	24.38	25.27	25.87	28.32	31.18	33.18	28.74
1919-20.....	30.79	29.58	33.70	37.47	37.99	38.84	38.60	39.20	40.11	40.50	40.50	40.50	37.32
1920-21.....	37.00	29.06	21.23	17.39	14.46	14.85	12.89	11.37	11.20	11.00	10.76	11.31	16.93
1921-22.....	12.57	19.10	18.66	17.12	17.28								.....
6-year average..	24.62	23.26	23.57	23.59	23.18	23.30	22.38	23.05	23.61	23.73	24.76	25.47	23.71

AUGUSTA.

Crop year.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Yearly average.
1914-15.....							7.90	8.27	9.40	9.17	8.92	8.56	.....
1915-16.....	8.55	10.22	11.88	11.17	11.73	11.95	11.49	11.66	11.74	12.54	12.65	12.79	11.56
1916-17.....	14.18	15.31	17.70	19.61	18.64	17.76	16.46	18.74	20.08	20.41	24.60	25.32	19.07
1917-18.....	24.59	21.63	26.93	28.42	29.37	31.16	31.15	33.44	33.08	28.61	30.45	29.34	29.01
1918-19.....	31.14	32.88	30.46	27.98	28.24	27.33	25.43	26.17	26.78	28.96	31.55	33.59	29.21
1919-20.....	30.72	29.11	31.72	38.31	38.46	39.67	38.48	40.04	41.06	41.44	42.13	40.65	37.93
1920-21.....	35.03	28.17	21.60	17.75	14.62	14.16	12.67	10.52	11.00	11.36	10.62	11.29	16.62
1921-22.....	12.83	19.49	18.71	16.93	17.17								.....
6-year average..	24.04	22.94	23.88	23.93	23.51	23.72	22.61	23.48	23.96	23.89	25.33	25.50	23.90

SAVANNAH.

Crop year.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Yearly average.
1914-15.....							8.14	8.36	9.29	9.36	9.03	8.66	.....
1915-16.....	8.62	10.21	11.93	11.60	12.11	12.20	11.79	11.90	11.90	12.61	12.75	13.00	11.72
1916-17.....	14.21	15.40	17.54	19.69	19.27	18.45		18.82	20.15	20.62	24.83	25.95	19.54
1917-18.....	25.20	21.87	27.05	28.26	29.28	31.12	30.91	32.53	33.42	31.50	30.21	30.10	29.29
1918-19.....	31.22	32.91	30.53	29.43	27.23	31.00	27.23	27.01	26.96	29.11	31.92	33.61	30.04
1919-20.....	31.64	29.66	31.56	38.45	38.91	39.89	39.48	40.31	41.60	41.33	41.74	40.87	38.22
1920-21.....	34.69	28.74	22.12	18.88	15.68	15.62	13.95	11.75	11.18	11.83	10.91	11.31	17.20
1921-22.....	12.74	19.64	19.30	17.17	17.39								.....
6-year average..	24.26	23.14	23.96	24.30	24.13	24.71	24.67	23.72	24.25	24.53	25.40	25.81	24.34

MONTGOMERY.

Crop year.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Yearly average.
1914-15.....							7.70	8.04	9.04	8.82	8.70	8.38	.....
1915-16.....	8.12	10.02	11.74	11.27	11.65	11.75	11.32	11.37	11.52	12.28	12.46	12.69	11.37
1916-17.....	13.92	15.21	17.13	19.34	18.33	17.78	16.81	18.64	19.88	20.14	24.06	24.82	18.86
1917-18.....	21.67	21.47	20.98	28.43	29.49	31.28	31.30	33.36	33.88	29.48	30.50	29.63	29.15
1918-19.....	29.00	32.39	30.24	28.56	28.19	28.18	27.00	25.98	26.81	28.54	31.10	33.36	29.19
1919-20.....	30.68	33.30	34.26	38.16	38.26	39.29	38.39	39.41	40.90	40.67	40.88	40.15	37.52
1920-21.....	35.38	27.84	21.24	17.97	14.40	13.86	12.32	10.39	10.53	10.89	10.09	10.53	16.37
1921-22.....	11.89	18.73	18.46	16.68	16.92								.....
6-year average..	23.94	22.69	23.65	23.96	23.39	23.74	22.86	23.19	23.92	23.67	24.73	25.20	23.74

MEMPHIS.

Crop year.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Yearly average.
1914-15.....							7.87	8.26	9.24	9.17	8.99	8.69	.....
1915-16.....	8.81	10.32	12.15	11.55	12.12	12.29	11.79	11.82	12.00	12.81	13.07	13.15	11.83
1916-17.....	14.35	15.56	17.40	19.60	18.96	17.88	17.00	18.17	19.97	20.34	24.02	25.75	19.08
1917-18.....	25.96	22.97	27.84	28.91	29.57	31.07	31.36	32.82	33.57	30.06	30.60	30.60	29.49
1918-19.....	30.98	33.89	31.56	30.17	29.42	29.29	27.18	26.86	26.90	29.05	32.18	33.80	30.11
1919-20.....	33.48	30.96	35.95	41.17	39.88	40.35	39.22	40.04	41.69	41.31	40.73	39.60	38.70
1920-21.....	36.35	31.00	21.63	18.28	14.75	14.46	13.48	11.65	11.25	12.63	11.06	11.82	17.28
1921-22.....	12.17	19.46	19.71	18.27	18.18								.....
6-year average..	25.00	24.12	24.38	24.95	24.12	24.22	23.31	23.56	24.23	24.21	25.17	25.69	24.42

¹ Average of 11 months.² Five-year average.

COTTON—Continued.

TABLE 179.—Cotton, middling: Monthly and yearly average spot price, cents per pound—Continued.

[Compiled from daily reports, Bureau of Markets and Crop Estimates.]

LITTLE ROCK.

Crop year.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Yearly average.
1911-15.....	.....	.....	.....	.....	.....	.....	7.67	8.15	9.01	9.07	8.89	8.58	.....
1915-16.....	8.61	10.08	12.32	11.68	12.15	12.28	11.94	11.88	12.25	12.80	12.96	13.07	11.84
1916-17.....	14.27	15.26	17.33	19.58	18.80	17.70	16.81	17.89	19.71	19.99	23.90	25.42	18.89
1917-18.....	25.49	22.14	26.72	28.26	29.55	31.02	30.96	32.53	33.82	30.00	29.29	29.35	29.05
1918-19.....	30.73	33.99	31.70	30.11	29.37	28.20	26.45	26.83	26.40	28.33	31.34	33.55	29.75
1919-20.....	31.78	30.31	35.32	40.08	39.94	39.98	39.10	40.19	42.57	41.45	40.31	39.60	38.38
1920-21.....	34.89	28.28	21.38	18.23	14.96	14.45	13.35	11.49	10.63	11.35	10.68	10.58	16.69
1921-22.....	11.81	19.60	19.75	18.12	17.84	.....	.....	.....	.....	.....	.....	.....	.....
6-year average..	24.29	23.34	24.13	24.66	24.13	23.94	23.10	23.47	24.15	23.99	24.74	25.26	24.10

DALLAS.

Crop year.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Yearly average.
1911-15.....	.....	.....	.....	.....	.....	.....	7.87	8.25	9.15	8.71	8.57	8.25	.....
1915-16.....	8.56	10.17	11.72	11.13	11.73	11.34	11.37	11.63	11.78	12.47	12.72	13.04	11.51
1916-17.....	11.14	14.53	16.51	19.18	17.03	17.17	15.75	17.77	19.09	19.58	24.17	25.04	18.43
1917-18.....	24.86	21.88	26.16	27.46	28.53	30.74	30.71	32.56	31.32	28.85	29.76	28.79	28.47
1918-19.....	31.09	33.34	30.59	28.73	29.33	27.72	25.84	25.71	27.02	29.78	32.10	34.16	29.64
1919-20.....	31.05	30.00	36.65	40.58	41.11	42.08	41.29	42.75	42.78	40.60	39.64	38.30	38.95
1920-21.....	32.74	26.40	20.69	17.08	13.70	13.63	12.16	10.64	10.53	11.20	10.23	10.50	15.79
1921-22.....	12.11	19.25	19.17	17.10	17.12	.....	.....	.....	.....	.....	.....	.....	.....
6-year average..	23.71	22.67	25.82	24.01	23.67	23.86	22.85	23.51	23.75	23.74	24.77	24.97	23.80

HOUSTON.

Crop year.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Yearly average.
1911-15.....	.....	.....	.....	.....	.....	.....	8.33	8.80	9.82	9.21	9.06	8.68	.....
1915-16.....	9.04	10.56	12.11	11.62	12.27	12.36	11.82	12.09	12.27	12.99	13.26	13.60	12.60
1916-17.....	11.79	15.39	17.42	19.80	18.10	17.64	16.05	18.18	19.43	20.13	24.60	25.54	18.92
1917-18.....	25.67	22.62	26.62	27.87	28.77	31.25	30.91	32.94	31.80	28.66	30.91	28.75	28.85
1918-19.....	31.26	33.70	32.65	30.01	30.26	28.56	27.00	26.43	27.33	30.18	32.04	31.24	30.26
1919-20.....	31.65	31.33	35.88	40.79	40.74	41.72	39.96	41.52	42.33	40.67	39.54	38.10	38.77
1920-21.....	32.94	27.36	20.98	17.56	14.16	13.95	12.62	10.95	10.89	11.53	11.02	11.09	16.33
1921-22.....	13.05	20.62	19.61	17.65	17.73	.....	.....	.....	.....	.....	.....	.....	.....
6-year average..	24.22	23.49	24.54	24.61	24.05	24.25	23.66	23.68	24.01	23.98	25.28	25.32	24.19

GALVESTON.

Crop year.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Yearly average.
1915-16.....	9.15	10.59	12.20	11.66	12.30	12.89	11.89	12.14	12.30	12.98	13.36	13.71	12.06
1916-17.....	14.77	15.48	17.48	19.82	18.43	17.79	16.30	18.31	19.63	20.18	24.58	25.99	19.06
1917-18.....	25.70	22.66	26.82	28.07	29.11	31.28	31.10	33.08	32.28	28.40	30.89	29.37	29.06
1918-19.....	31.56	31.19	32.25	30.30	30.64	29.45	28.26	26.94	27.63	30.59	32.87	34.62	30.78
1919-20.....	31.87	31.58	37.10	41.32	41.87	42.53	41.10	42.52	42.99	41.64	39.83	38.59	39.41
1920-21.....	33.78	28.15	21.98	18.10	15.00	14.88	12.99	11.76	11.47	12.01	11.27	11.80	16.89
1921-22.....	13.33	20.33	20.05	17.99	17.92	.....	.....	.....	.....	.....	.....	.....	.....
6-year average..	24.47	23.78	24.64	24.88	24.56	24.61	23.61	24.12	24.38	24.80	25.47	25.68	24.54

NEW ORLEANS.¹

Crop year.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Yearly average.
1910-11.....	14.92	13.49	14.21	14.50	14.85	14.95	14.62	14.54	14.70	15.48	15.26	14.30	14.65
1911-12.....	11.96	11.29	9.61	9.35	9.17	9.53	10.31	10.65	11.61	11.72	12.07	12.93	10.85
1912-13.....	12.07	11.37	10.95	12.15	12.81	12.58	12.51	12.45	12.44	12.29	12.44	12.34	12.20
1913-14.....	12.02	13.11	13.73	13.26	12.98	12.93	12.90	12.95	13.11	13.36	13.79	13.34	13.12
1914-15.....	(2)	8.42	7.02	7.43	7.18	7.87	8.01	8.34	9.43	9.04	9.12	8.71	8.23
1915-16.....	8.94	10.40	11.95	11.50	11.89	12.04	11.45	11.73	11.88	12.61	12.80	13.03	11.68
1916-17.....	14.26	15.27	17.24	19.45	18.34	17.33	17.14	17.94	19.50	20.06	24.17	25.41	18.84
1917-18.....	25.10	21.68	26.76	28.08	29.07	31.07	30.92	32.76	33.05	28.92	30.71	29.50	28.97
1918-19.....	30.23	33.28	31.19	29.75	29.44	28.84	26.97	26.84	26.70	29.36	32.09	33.93	29.88
1919-20.....	31.38	30.38	35.30	39.58	39.89	40.28	39.40	40.69	41.41	40.32	40.49	39.41	38.21
1920-21.....	34.03	27.35	20.97	17.65	14.64	14.53	12.85	11.08	11.17	11.80	11.03	11.49	16.55
1921-22.....	12.78	19.35	18.99	17.27	17.16	.....	.....	.....	.....	.....	.....	.....	.....
11-year average..	19.49	17.82	18.08	18.43	18.21	18.36	17.92	18.18	18.64	18.63	19.45	19.49	18.47

¹ Prior to February, 1915, figures compiled from market reports of the New York Cotton Exchange; later figures compiled from daily reports, Bureau of Markets and Crop Estimates.² Market closed.³ No quotations prior to Sept. 23; average for 7 days' business.⁴ Average for 11 months.⁵ Ten-year average.

COTTON—Continued.

TABLE 180.—Cotton: International trade, calendar years 1909-1920.

Expressing bales of 500 pounds gross weight or 478 pounds net. The figures for cotton refer to ginned and unginned cotton and linters, but not to mill waste, cotton baling, scarto (Egyptian and Sudan). Wherever unginned cotton has been separately stated in the original reports it has been reduced to ginned cotton in this statement at the ratio of 3 pounds unginned to 1 pound ginned. See "General note," Table 125.

Country.	Average, 1909-1913.		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORT- ING COUNTRIES.	<i>1,000 bales.</i>	<i>1,000 bales.</i>	<i>1,000 bales.</i>	<i>1,000 bales.</i>	<i>1,000 bales.</i>	<i>1,000 bales.</i>	<i>1,000 bales.</i>	<i>1,000 bales.</i>
Brazil.....	1	83	.....	12	.....	56	.....	114
British India.....	60	1,966	27	819	14	1,528	24	2,052
China.....	43	240	53	360	67	299	189	105
Egypt.....	(1)	1,412	(1)	1,040	(1)	1,390	(1)	829
Persia.....	(1)	109	1	9	1	11	.....	.....
Peru.....	(1)	87	.....	90	.....	183	(1)	.....
United States.....	215	9,008	236	4,431	367	7,015	628	6,651
PRINCIPAL IMPORT- ING COUNTRIES.								
Austria-Hungary.....	906	12	.....	.....	.....	56	.....	.....
Belgium.....	496	159	.....	.....	289	51	506	221
Canada.....	137	.....	226	.....	179	.....	211	.....
France.....	1,435	316	659	27	1,007	82	1,083	151
Germany.....	2,268	232	.....	.....	.....	.....	691	5
Italy.....	896	(1)	601	(1)	826	2	825	1
Japan.....	1,405	.....	1,886	.....	2,190	.....	2,170	.....
Mexico.....	23	1	.....	.....	.....	.....	.....	.....
Netherlands.....	277	145	1	(1)	111	4	111	8
Russia.....	886	(1)	.....	.....	.....	.....	.....	.....
Spain.....	382	1	277	(1)	311	1	375	3
Sweden.....	93	1	33	.....	76	2	113	.....
Switzerland.....	113	.....	38	.....	115	.....	97	.....
United Kingdom.....	4,161	.....	3,114	.....	3,843	.....	3,457	.....
Other countries.....	215	154	25	31	97	35	167	2
Total.....	14,005	13,950	7,174	6,828	9,526	10,680	10,752	10,140

¹ Less than 500 bales.² Four-year average.

COTTONSEED.

TABLE 181.—*Cottonseed: Production, by States, 1917-1921.*

[As reported by the United States Bureau of the Census.]

State.	Production.					Total value.				
	1917	1918	1919	1920	1921 ¹	1917	1918	1919	1920	1921 ¹
Virginia.....	8	11	10	9	7	\$550	\$740	\$740	\$230	\$220
North Carolina.....	273	398	368	410	355	18,630	26,810	27,340	10,550	11,650
South Carolina.....	550	699	633	720	338	38,200	47,550	47,460	16,620	10,971
Georgia.....	847	947	736	628	373	58,660	64,170	55,290	16,640	11,802
Florida.....	25	17	8	8	6	1,600	1,180	530	220	166
Alabama.....	220	350	316	294	282	15,910	23,910	23,620	7,840	8,228
Mississippi.....	402	545	427	397	387	26,900	35,340	28,100	9,570	11,225
Louisiana.....	284	261	132	172	131	18,080	16,650	8,660	4,490	3,522
Texas.....	1,390	1,199	1,379	1,934	980	89,290	74,670	82,640	41,350	27,937
Arkansas.....	432	439	393	540	383	28,420	28,240	24,880	12,400	11,055
Tennessee.....	107	147	138	145	151	7,090	9,440	9,210	3,700	4,736
Missouri.....	27	23	28	35	35	1,730	1,760	2,040	790	1,033
Oklahoma.....	426	256	452	594	236	26,310	15,920	27,130	11,219	5,305
All other.....	39	57	54	85	57	2,150	3,160	3,460	1,380	1,021
United States.....	5,040	5,300	5,071	5,071	3,721	333,550	349,490	340,470	136,990	108,972

¹ Preliminary.TABLE 182.—*Cottonseed: Farm price per ton on 15th of each month, 1910-1921.*

Year.	Jan. 15.	Feb. 15.	Mar. 15.	Apr. 15.	May 15.	June 15.	July 15.	Aug. 15.	Sept. 15.	Oct. 15.	Nov. 15.	Dec. 15.	Yearly average.
1910.....									\$26.23	\$26.86	\$25.36	\$25.65	\$26.02
1911.....	\$20.35	\$25.61	\$25.40	\$23.12	\$25.46	\$23.38	\$22.70	\$20.45	13.09	16.73	16.69	16.70	21.98
1912.....	16.57	16.81	18.21	18.62	19.21	19.24	19.04	18.02	17.61	18.04	18.57	21.42	18.45
1913.....	21.98	22.01	21.55	21.89	21.88	21.54	21.37	20.24	21.07	22.01	22.46	23.48	21.79
1914.....	22.70	23.37	23.60	24.17	23.56	23.62	22.78	20.16	13.88	15.28	14.01	17.73	20.40
1915.....	19.14	23.33	22.32	22.69	22.07	20.82	20.05	20.14	20.98	33.73	34.01	35.54	24.57
1916.....	36.85	36.75	36.56	38.13	37.91	35.79	36.06	35.22	41.15	47.19	55.82	50.35	42.81
1917.....	52.53	51.43	53.13	55.94	55.61	57.19	56.90	56.61	57.58	65.02	69.38	68.29	58.30
1918.....	67.51	66.95	68.27	68.08	68.16	66.03	64.11	61.34	67.90	65.85	61.97	65.05	66.18
1919.....	61.93	64.65	61.00	64.28	63.83	63.80	64.24	66.23	62.13	66.95	72.65	69.07	65.55
1920.....	69.88	62.34	67.18	68.71	69.88	66.16	61.64	43.22	29.96	28.94	26.00	19.83	51.73
1921.....	18.96	19.76	18.92	17.23	17.28	17.06	18.75	22.06	27.19	31.05	29.15	28.78	22.18

COTTONSEED OIL.

TABLE 183.—Cottonseed oil: Monthly and yearly average price per hundredweight of spot prime summer yellow, New York, 1910-11 to 1921-22.

[Compiled from New York Produce Exchange Reports and Oil, Paint, and Drug Reporter.]

Crop year.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Average.
1910-11.....	\$10.84	\$10.12	\$8.11	\$7.29	\$7.24	\$7.32	\$7.03	\$6.60	\$6.19	\$5.55	\$6.43	\$5.89	\$7.47
1911-12.....	5.85	6.96	5.97	5.73	5.37	5.39	5.54	5.69	6.46	7.18	6.86	6.67	6.14
1912-13.....	6.47	6.38	6.22	6.01	6.30	6.25	6.35	6.44	6.96	7.01	7.70	9.11	6.77
1913-14.....	8.88	7.67	7.00	7.05	6.86	6.98	7.12	7.38	7.51	7.18	7.30	7.18	7.34
1914-15.....	6.67	5.87	5.22	5.55	5.83	6.59	7.08	6.70	6.61	6.40	6.18	6.06	6.23
1915-16.....	5.78	6.30	7.71	7.93	8.38	8.99	9.59	10.53	10.73	10.91	10.91	10.04	8.98
1916-17.....	9.27	10.17	11.75	12.53	12.38	12.32	12.51	13.62	15.30	16.23	16.26	14.52	13.07
1917-18.....	14.84	16.44	17.99	18.59	18.65	20.09	20.33	19.84	19.75	20.00	20.25	20.25	18.91
1918-19.....	20.25	20.25	20.25	20.25	20.25	20.25	20.25	20.25	21.25	21.25	25.03	27.37	21.41
1919-20.....	25.88	21.33	23.00	22.75	21.50	21.56	19.67	19.07	18.54	19.21	16.70	13.21	20.23
1920-21.....	12.32	13.48	11.43	10.14	8.91	8.44	7.29	6.21	6.06	7.13	7.45	8.70	8.96
1921-22.....	8.73	9.90	8.67	8.31	8.29	.....	.....	.....	.....	.....	.....	.....	.....
11-year average..	11.55	11.36	11.33	11.26	11.06	11.31	11.16	11.12	11.40	11.73	11.92	11.73	11.41

¹ Largely nominal.

TABLE 184.—Cottonseed oil: International trade, calendar years, 1909-1920.

[See "General note," Table 125.]

Country.	Average, 1909-1913		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORTING COUNTRIES.	1,000 gallons.	1,000 gallons.	1,000 gallons.	1,000 gallons.	1,000 gallons.	1,000 gallons.	1,000 gallons.	1,000 gallons.
China.....	.....	281	.....	2,369	.....	3,430	.....	1,606
Egypt.....	257	476	.....	427	5	59	30	418
United States.....	1,629	33,968	2,430	15,876	3,707	25,751	1,261	24,631
PRINCIPAL IMPORTING COUNTRIES.								
Algeria.....	364	157	.....	.....	.....	.....	.....	.....
Australia.....	142	.....	119	.....	29	.....	.....	.....
Austria-Hungary.....	39	35	.....	.....	.....	.....	.....	.....
Belgium.....	2,251	1,086	.....	.....	446	316	414	159
Brazil.....	624	42	7	611	11	659	21	1,013
Canada.....	2,817	.....	6,255	.....	5,515	.....	6,091	.....
France.....	3,280	335	461	5	1,384	12	2,677	84
Germany.....	6,018	.....	.....	.....	.....	.....	.....	.....
Italy.....	4,600	1	1	.....	1,095	43	4,029	1
Malta.....	285	27	.....	.....	.....	.....	.....	.....
Martinique.....	292	.....	.....	.....	.....	.....	.....	.....
Mexico.....	3,607	341	.....	.....	.....	.....	.....	.....
Netherlands.....	5,352	52	.....	.....	5,837	1,709	2,602	731
Norway.....	1,504	.....	101	.....	1,584	.....	2,821	.....
Rumania.....	633	(²)	.....	.....	41	.....	.....	.....
Senegal.....	422	.....	.....	.....	.....	.....	.....	.....
Serbia.....	356	.....	.....	.....	.....	.....	.....	.....
Sweden.....	696	13	2	.....	1,257	41	.....	.....
United Kingdom.....	5,899	7,189	5,727	15	8,035	2,930	2,802	5,162
Other countries.....	3,562	6	2,044	902	2,165	961	925	.....
Total.....	44,498	48,929	17,170	19,905	31,141	35,908	23,673	33,808

¹ Three-year average.
² Less than 500 gallons.³ Four-year average.
⁴ One-year average.⁵ Two-year average.

TOBACCO.

TABLE 185. —Tobacco: Area and production in undermentioned countries, 1909-1920.

Country.	Area.				Production.			
	Average 1909- 1913. ¹	1918	1919	1920	Average 1909- 1913. ¹	1918	1919	1920
NORTH AMERICA.	<i>1,000 acres.</i>	<i>1,000 acres.</i>	<i>1,000 acres.</i>	<i>1,000 acres.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>
United States.....	1,148	1,647	1,951	1,960	990, 176	1,439, 071	1,465, 481	1,582, 225
Porto Rico.....	18	24	40	42	12, 700	17, 196	23, 690	25, 340
Canada:								
Quebec.....	10	7	23	33	6, 262	7, 732	16, 770	26, 400
Ontario.....	4	6	9	20	8, 372	6, 500	17, 000	21, 689
Total Canada..	14	13	32	53	14, 634	14, 232	33, 770	48, 089
Costa Rica.....							² 228	
Cuba.....					57, 490			
Dominican Republic.....			² 25		29, 290	² 35, 000	² 30, 000	
Guatemala.....					674	1, 049		
Jamaica.....	1				418			
Mexico.....					34, 711	27, 963		
SOUTH AMERICA.								
Argentina.....	24	27		15	28, 568	² 9, 266		
Brazil.....					59, 691		² 53, 900	
Chile.....	2	3			3, 377	6, 929		
Uruguay.....	3	2		1	2, 371	949		
Paraguay.....		35			13, 000	30, 864	² 35, 274	
EUROPE.								
Austria.....	⁴ 0				⁴ 14, 169			
Croatia Slavonia ⁴					107			
Bosnia-Herzegovina ⁴					9, 833			
Belgium.....	10	15	17	7	20, 741		30, 050	13, 490
Bulgaria.....	⁴ 24	89	55	63	⁴ 15, 220		35, 260	53, 490
Denmark.....	1				219			
France.....	⁴ 39	20	23	29	⁴ 45, 272	⁴ 19, 568	34, 070	46, 031
Germany.....	⁴ 39	29	31	32	66, 536	51, 528	47, 379	
Greece.....		116		86	63, 165	57, 195	68, 500	
Hungary.....	⁴ 120			51	⁴ 143, 123			
Italy.....	19	17	21	20	22, 120	19, 841	21, 160	28, 260
Netherlands.....	1	1	1	1	1, 829			
Rumania.....	⁴ 25	⁵ 32	36	⁵ 40	⁴ 16, 426	⁵ 13, 470	⁵ 26, 477	⁵ 5, 370
Russia proper ⁴	108				177, 107			
Northern Caucasus ⁴	64				55, 842			
Serbia ⁴	5				3, 988			
Sweden.....	1	1	1		1, 637	1, 389		1, 600
Switzerland.....	1	1	1	1	1, 444		660	860
ASIA.								
British India.....	1, 026	1, 015			450, 000			
British North Borneo.....		2			2, 891			
Ceylon.....	14	18			4, 273			
Dutch East Indies:								
Java and Madura.....	432				117, 180	² 61, 480		
Sumatra, east coast of.....					46, 699	² 51, 801		
Japanese Empire:								
Japan.....	72	64	76	76	98, 717	83, 544	107, 480	113, 360
Chosen (Korea).....	46				29, 737			
Formosa.....	1				1, 120			
Philippine Islands.....	155	194	182	250	63, 907	135, 705	124, 500	143, 076
Russia, Asiatic.....	37				30, 939			
AFRICA.								
Algeria.....	21	27	43	32	23, 974	33, 069	31, 660	24, 656
Tunis.....		(⁷)	1	1	259	484	620	
Nyasaland.....	7	⁸ 9	6	3	2, 416	⁸ 4, 701	2, 553	4, 009
Rhodesia.....	5	3	5	⁸ 8	901	⁹ 620	1, 468	⁹ 2, 030
Union of South Africa.....	19	23			13, 789	14, 931	¹⁰ 14, 183	¹⁰ 11, 644
OCEANIA.								
Australia.....	2	1	2	2	1, 837	459	2, 664	¹¹ 2, 352
Fiji.....		1			42			

¹ Five-year average except in a few cases where statistics were unavailable.

² Unofficial.

³ State of Bahia.

⁴ Old boundaries.

⁵ Former Kingdom and Bessarabia.

⁶ Bessarabia only.

⁷ Less than 500.

⁸ Cultivated by Europeans.

⁹ Southern Rhodesia.

¹⁰ Excluding native locations, reserves, etc.

¹¹ Excludes Victoria.

TOBACCO—Continued.

TABLE 186.—Tobacco: World production as far as reported, 1900–1920.

Year.	Production.	Year.	Production.	Year.	Production.	Year.	Production.
	<i>Pounds.</i>		<i>Pounds.</i>		<i>Pounds.</i>		<i>Pounds.</i>
1900.....	2,201,193,000	1906	2,270,298,000	1912	1,274,319,000	1918	2,138,274,000
1901.....	2,270,213,000	1907	2,391,061,000	1913	2,140,258,000	1919	2,178,382,000
1902.....	2,376,054,000	1908	2,382,601,000	1914	2,254,087,000	1920	2,175,351,000
1903.....	2,401,268,000	1909	2,742,500,000	1915	2,153,395,000	1921	.....
1904.....	2,146,641,000	1910	2,833,729,000	1916	1,547,867,000	1922	.....
1905.....	2,279,728,000	1911	2,566,202,000	1917	1,766,760,000	1923	.....

TABLE 187.—Tobacco: Acreage, production, value, condition, etc., in the United States, 1849–1921.

[See note for Table 117.]

Year.	Acreage ('000 omitted).	Average yield per acre.	Production ('000 omitted).	Average farm price per pound Dec. 1.	Farm value Dec. 1 ('000 omitted).	Domestic exports of unmanu- factured, fiscal year beginning July 1.	Imports of unmanu- factured, fiscal year beginning July 1.	Condition of growing crop.			
								July 1.	Aug. 1.	Sept. 1.	When har- vested.
	<i>Acres.</i>	<i>Lbs.</i>	<i>Pounds.</i>	<i>Cts.</i>	<i>Dolls.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
1849.....	.....	.....	199,753	.....	.....	.....	.....	.....	.....	.....	.....
1850.....	.....	.....	444,309	.....	.....	.....	.....	.....	.....	.....	.....
1859.....	.....	.....	293,735	.....	.....	.....	.....	100.0	92.7	73.1	83.7
1870.....	639	794.1	506,063	6.0	30,200	.....	.....	88.0	77.0	87.0	.....
1889.....	695	638.5	457,881	6.9	31,696	.....	.....	89.0	84.4	76.2	80.7
1890.....	1,102	728.5	802,307	7.1	57,273	.....	.....	83.7	80.0	84.0	81.9
1900.....	1,046	778.0	814,345	6.6	53,661	315,787,782	26,851,253	83.5	82.9	77.5	76.1
1901.....	1,039	788.0	818,953	7.1	58,283	301,007,365	29,428,837	86.5	72.1	78.2	81.5
1902.....	1,061	797.3	821,824	7.0	57,564	368,184,084	34,016,956	85.6	81.2	81.5	84.1
1903.....	1,038	786.3	815,972	6.8	55,515	311,971,831	31,162,636	85.1	82.9	83.4	82.3
1904.....	806	819.0	660,461	8.1	53,383	334,302,091	33,288,378	85.3	83.9	83.7	85.6
1905.....	776	815.6	633,034	8.5	53,519	312,227,202	31,125,970	87.4	84.1	85.1	85.8
1906.....	796	857.2	682,429	10.0	68,233	340,742,854	40,808,507	86.7	87.2	86.2	84.6
1907.....	821	850.5	698,126	10.2	71,411	330,812,658	35,005,131	81.3	82.8	82.5	84.3
1908.....	875	820.2	718,061	10.3	74,130	287,900,940	43,123,196	86.6	85.8	84.3	84.1
1909.....	1,295	814.8	1,055,133	10.1	106,374	357,196,074	46,853,389	89.8	83.4	80.2	81.3
1910 ¹	1,366	807.7	1,103,415	9.3	102,142	355,227,072	48,263,288	85.2	78.5	77.7	80.2
1911.....	1,013	893.7	905,109	9.4	85,210	379,845,320	54,740,350	72.6	63.0	71.1	80.5
1912.....	1,226	785.5	962,855	10.8	104,063	418,796,966	67,977,118	87.7	82.8	81.1	81.8
1913.....	1,216	784.3	953,734	12.8	122,481	449,749,982	61,174,751	82.8	78.3	74.5	76.6
1914.....	1,224	845.7	1,034,679	9.8	101,411	348,346,091	45,764,728	96.0	66.5	71.4	81.8
1915.....	1,370	775.4	1,082,237	9.1	96,281	445,293,156	48,013,335	85.5	79.7	80.7	81.9
1916.....	1,413	816.0	1,153,278	14.7	169,972	411,598,860	46,136,317	87.6	81.4	86.5	85.6
1917.....	1,513	823.1	1,249,276	24.0	300,449	289,170,686	79,367,563	86.8	88.1	84.5	87.8
1918 ¹	1,647	873.7	1,439,071	28.0	402,264	629,287,761	83,951,103	83.1	83.0	82.4	87.4
1919.....	1,931	751.1	1,465,481	39.0	570,868	648,037,655	94,005,182	83.6	75.1	71.8	73.6
1920.....	1,960	807.3	1,582,225	21.2	385,675	.....	.....	84.3	84.1	84.6	83.3
1921.....	1,435	749.4	1,075,418	19.9	223,755	.....	.....	71.9	66.0	70.5	75.6

¹Figures adjusted to census basis.

TOBACCO—Continued.

TABLE 188.—*Tobacco: Acreage, production, and total farm value, by States, 1920-21.*

State	Thousands of acres.		Production (thousands of pounds).		Total value, basis Dec. 1 price (thousands of dollars).	
	1920	1921	1920	1921	1920	1921
Massachusetts.....	10	10	15,500	13,700	6,293	4,932
Connecticut.....	30	31	44,400	45,074	15,540	18,480
New York.....	2	2	2,560	2,500	691	482
Pennsylvania.....	43	42	64,930	61,320	12,986	8,893
Maryland.....	35	26	30,625	18,590	8,881	3,532
Virginia.....	246	167	179,580	91,850	43,099	18,829
West Virginia.....	10	8	8,000	6,000	2,000	1,440
North Carolina.....	625	450	433,750	232,000	109,739	65,520
South Carolina.....	100	80	65,000	50,400	9,750	5,544
Georgia.....	22	14	13,200	7,396	4,884	1,974
Florida.....	4	4	4,200	3,600	2,016	1,440
Ohio.....	63	42	60,480	33,640	7,862	5,706
Indiana.....	22	14	19,800	12,250	2,772	1,838
Wisconsin.....	50	48	62,400	61,488	16,162	7,686
Missouri.....	5	4	5,000	3,700	1,650	740
Kentucky.....	560	385	476,000	325,710	71,400	50,485
Tennessee.....	130	105	94,900	78,750	18,980	15,760
Alabama.....	2	2	1,400	1,500	770	390
United States.....	1,960	1,435	1,582,225	1,075,418	333,675	213,846

TABLE 189.—*Tobacco: Forecasts of production, monthly, with preliminary and final estimates.*

[000 omitted.]

Year.	July.	August.	September.	October.	November production estimate.	Final estimate.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
1912.....	1,009,000	980,000	976,000	974,000	959,437	962,855
1913.....	928,000	896,000	861,000	877,000	903,875	953,734
1914.....	759,961	791,379	862,473	954,245	982,715	1,034,679
1915.....	1,104,709	1,082,644	1,120,149	1,098,804	1,050,025	1,032,237
1916.....	1,191,326	1,196,659	1,223,572	1,203,077	1,145,530	1,153,273
1917.....	1,226,012	1,270,056	1,221,186	1,243,023	1,188,478	1,249,276
1918.....	1,187,123	1,228,081	1,218,165	1,265,362	1,266,686	1,439,071
1919.....	1,453,102	1,335,052	1,279,012	1,278,062	1,316,553	1,465,481
1920.....	1,500,800	1,544,489	1,553,812	1,478,788	1,476,444	1,582,225
Average.....	1,150,659	1,147,151	1,146,152	1,152,485	1,142,971	1,211,426
1921.....	932,157	889,266	948,324	991,564	1,020,874	¹ 1,075,418

¹ Preliminary.TABLE 190.—*Tobacco: Condition of crop, United States, on 1st of months named, 1900-1921.*

Year	July.	Aug.	Sept.	Oct.	Year.	July.	Aug.	Sept.	Oct.
1900.....	88.5	82.0	77.5	76.1	1911.....	72.6	68.0	71.1	80.5
1901.....	86.5	72.1	78.2	81.5	1912.....	87.7	82.8	81.1	81.8
1902.....	85.6	81.2	81.5	84.1	1913.....	82.8	78.3	74.5	76.6
1903.....	85.1	82.9	83.4	82.3	1914.....	66.0	66.5	71.4	81.8
1904.....	85.3	83.9	83.7	85.6	1915.....	85.5	79.7	80.7	81.9
1905.....	87.4	84.1	85.1	85.8	1916.....	87.6	84.4	85.5	85.6
1906.....	86.7	87.2	86.2	84.6	1917.....	86.8	88.1	84.5	87.8
1907.....	81.3	82.8	82.5	84.8	1918.....	83.1	83.6	82.5	87.4
1908.....	86.6	85.8	84.3	84.1	1919.....	83.6	75.1	71.8	73.6
1909.....	89.8	83.4	80.2	81.3	1920.....	84.3	84.1	84.6	53.3
1910.....	85.3	78.5	77.7	80.2	1921.....	71.9	66.6	70.5	75.6

TOBACCO—Continued.

TABLE 191.—Tobacco: Yield per acre, price per pound December 1, and value per acre, by States.

State.	Yield per acre (pounds).						Farm price per pound (cents).											Value per acre (dollars). ¹	
	5-year average 1917-1921.	1917	1918	1919	1920	1921	10-year average 1912-1921.	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	5-year average 1916-1920.	1921
Mass.....	1,472	1,400	1,500	1,540	1,550	1,370	30.3	23.9	21.0	17.7	14.5	25.0	38.4	40.0	46.3	40.6	36.0	578.98	493.20
Conn.....	1,480	1,400	1,500	1,565	1,480	1,454	31.2	24.1	21.0	18.5	17.0	27.0	38.4	44.0	46.3	35.0	41.0	576.06	596.14
N. Y.....	1,264	1,250	1,250	1,290	1,280	1,250	16.8	12.6	12.2	12.0	9.5	13.0	22.0	18.0	22.5	27.0	19.3	259.15	241.25
Pa.....	1,422	1,400	1,420	1,320	1,510	1,460	13.4	8.5	7.5	8.5	9.2	14.2	21.0	14.0	17.0	20.0	14.4	242.30	210.24
Md.....	777	790	830	675	875	715	17.8	8.0	9.3	8.0	8.5	16.0	20.0	30.0	30.0	29.0	19.0	197.29	135.85
Va.....	659	700	770	530	730	550	20.4	12.0	13.9	9.0	9.4	14.6	26.5	27.0	47.4	42.4	29.5	183.82	112.75
W. Va.....	754	800	720	700	800	750	22.1	11.0	12.0	11.0	10.0	15.0	26.0	36.0	50.0	25.0	24.0	231.30	180.00
N. C.....	650	630	705	616	694	560	24.9	16.0	18.5	11.5	11.2	20.0	31.5	35.1	53.6	25.3	26.0	212.33	145.60
S. C.....	686	710	720	722	650	630	15.8	10.9	13.8	9.7	7.0	14.4	23.1	13.1	122.8	115.0	11.0	144.57	69.30
Ga.....	999	1,000	800	530	600	564	32.2	30.0	31.0	25.0	23.0	27.0	57.0	46.0	21.5	37.0	25.0	318.39	141.00
Fla.....	992	1,100	960	950	1,050	900	39.0	30.0	31.0	30.0	23.0	30.0	57.0	46.0	54.4	54.0	40.0	490.67	360.00
Ohio.....	936	960	980	880	930	920	15.8	9.1	11.4	8.8	9.0	13.0	25.0	19.5	33.7	13.0	15.0	193.84	138.00
Ind.....	881	950	930	800	900	875	15.4	9.0	11.0	9.0	7.3	13.0	20.0	20.0	73.5	21.4	0.15	182.20	131.25
Wis.....	1,224	1,000	1,330	1,270	1,248	1,281	15.3	11.0	12.0	11.0	6.0	12.5	17.5	22.0	22.2	25.9	12.5	524.60	360.12
Mo.....	953	940	900	1,000	1,000	925	20.0	12.0	12.7	13.0	12.0	15.0	21.2	25.0	36.6	33.3	0.20	251.36	185.00
Ky.....	871	900	960	800	850	816	16.3	8.7	10.0	8.4	7.8	12.7	20.0	26.0	33.8	1.15	0.15	519.98	131.13
Tenn.....	780	810	800	810	730	750	14.3	7.1	8.4	7.5	6.3	10.1	17.0	21.4	25.1	20.0	0.20	147.80	150.00
Ala.....	792	730	700	630	700	750	31.6	35.0	25.0	23.0	22.0	30.0	35.0	30.0	30.0	0.55	0.26	225.90	195.00
La.....	431	330	420	434	500	450	38.8	30.0	25.0	35.0	30.0	28.0	35.0	65.0	65.0	40.0	0.35	200.72	157.50
U. S.....	802.8	823.1	873.7	751.1	807.3	749.4	18.9	10.8	12.8	9.8	9.1	14.7	24.0	28.0	30.0	21.2	19.9	205.22	152.63

¹ Based upon farm price Dec. 1.

TABLE 192.—Tobacco: Extent and causes of yearly crop losses, 1909-1920.

Year.	Deficient moisture.	Excessive moisture.	Floods.	Frost and freeze.	Hail.	Hot winds.	Storms.	Total climatic.	Plant disease.	Insect pests.	Animal pests.	Defective seed.	Total.
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
1920.....	2.3	7.0	0.6	0.7	1.0	(¹)	0.1	11.7	5.5	2.6	.....	(¹)	21.0
1919.....	8.9	7.9	.6	.2	1.1	0.1	0.2	19.2	0.6	2.8	.....	(¹)	23.0
1918.....	8.6	.4	.2	.7	1.1	.2	.2	11.4	.3	2.1	.....	.1	14.2
1917.....	3.3	2.2	.5	3.3	1.2	.1	.2	11.1	.2	2.1	.....	.1	15.2
1916.....	3.5	5.5	1.3	1.3	1.0	.1	.8	14.0	.3	2.8	.....	(¹)	18.4
1915.....	3.9	8.2	.9	1.2	.8	.1	.9	16.3	.6	4.0	.....	.1	23.5
1914.....	18.1	.2	.1	.4	.6	.3	.1	20.1	(¹)	2.7	.....	.1	24.8
1913.....	15.3	.7	.4	1.2	1.2	.3	.6	20.0	.1	3.0	.....	(¹)	25.0
1912.....	7.6	4.8	.8	.5	1.0	.2	.2	15.3	.7	2.8	.....	.1	21.2
1911.....	16.7	.9	.....	.8	.1	.6	.....	19.5	.3	1.0	.....	.2	22.6
1910.....	4.8	6.8	1.2	.4	.3	(¹)	.1	14.4	.7	2.8	.....	.1	20.6
1909.....	5.5	6.8	1.1	.7	.8	.1	.2	15.3	.7	2.6	.....	(¹)	19.6
Average.....	7.7	4.3	.7	.9	.8	.3	.3	15.7	.8	2.6	.....	.1	20.8

¹ Less than 0.05 per cent.

TOBACCO—Continued.

TABLE 193.—Tobacco: Wholesale price per pound, 1921-1914.

Date.	Hopkinsville.			Louisville.			Richmond.			Baltimore.		
	Leaf, common to fine.			Leaf (Burley dark red), common to good.			Leaf, smokers' common to fine			Leaf (Maryland), medium to fine red.		
	Low.	High.	Aver.	Low.	High.	Aver.	Low.	High.	Aver.	Low.	High.	Aver.
1921.	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
January.....	8.00	35.00	20.19	7.00	25.00	16.08	10.00	20.00	15.00	15.00	58.00	39.71
February.....	8.00	42.50	23.56	7.00	25.00	18.00	10.00	30.00	20.00	18.00	40.00	29.00
March.....	8.00	45.00	25.12	7.00	25.00	16.00	10.00	30.00	20.00	18.00	40.00	29.00
April.....	8.00	52.00	27.60	7.00	25.00	18.00	7.00	30.00	12.88	18.00	40.00	29.00
May.....	8.00	55.00	25.25	7.00	25.00	16.00	7.00	14.00	10.50	18.00	40.00	29.00
June ¹				7.00	25.00	15.50	7.00	14.00	10.50	18.00	40.00	31.50
July ¹				8.00	30.00	16.00	7.00	14.00	10.50	18.00	40.00	29.00
August ¹				9.00	30.00	19.38	7.00	14.00	10.50	18.00	40.00	29.00
September ¹				11.00	30.00	20.50	7.00	14.00	10.50	18.00	40.00	29.00
October ¹				11.00	30.00	20.50	7.00	14.00	10.50	18.00	40.00	29.00
November ¹				12.00	30.00	21.00	7.00	14.00	10.50	18.00	45.00	31.50
December.....	12.00	45.00	25.12	12.00	30.00	21.00	7.00	14.00	10.50	18.00	45.00	31.50
	8.00	55.00	24.47	7.00	30.00	17.83	7.00	30.00	12.66	18.00	45.00	30.52
1920.....	14.00	53.00	27.01	13.00	42.00	27.05	10.00	37.00	24.40	25.00	58.00	41.18
1919.....	12.14	36.50	21.90	10.00	48.00	26.60	15.00	45.00	27.31	26.00	40.00	37.22
1918.....	14.00	25.00	19.03	25.00	44.00	34.84	16.00	45.00	28.74	22.00	49.00	33.56
1917.....	10.00	20.50		13.00	32.00		9.00	27.00		17.00	28.00	
1916.....	5.00	14.50		10.00	19.00		7.00	18.00		9.00	21.00	
1915.....	4.00	12.50		8.00	15.00		7.00	20.00		8.00	14.00	
1914.....	7.50	14.00		9.00	16.00		7.00	20.00		8.00	15.00	

¹ No quotations for Hopkinsville.

TOBACCO—Continued.

TABLE 194.—Tobacco (unmanufactured): International trade, calendar years 1909–1920.

[Tobacco comprises leaf, stems, strippings, and tombac, but not snuff. See "General note," Table 125.]

Country.	Average, 1909–1913.		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORTING COUNTRIES.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.
Algeria.....	4,779	11,651	2,128	14,835	3,941	25,518	6,409	23,724
Brazil.....	620	59,991	1,216	63,957	1,476	93,862	2,176	67,376
British India.....	6,538	28,871	5,775	28,514	9,404	44,610	10,121	36,379
Bulgaria.....	(¹)	4,340	.....	.....	.....	16,216	.....	38,793
Ceylon.....	.....	4,093	4	4,737	2	1,739	4	3,590
Cuba.....	141	38,035	(¹)	27,351	.....	36,326	.....	.....
Dominican Republic.....	.....	22,365	.....	33,510	.....	41,758	.....	.....
Dutch East Indies.....	8,074	168,823	4,244	17,746	4,381	301,559	.....	.....
Greece.....	12,024	18,113	19	30,835	282	59,351	157	59,276
Mexico.....	1,845	1,988	.....	.....	.....	.....	.....	.....
Paraguay.....	.....	11,361	.....	15,516	.....	22,759	.....	18,993
Persia.....	797	3,874	329	1,766	634	3,721	.....	.....
Philippine Islands.....	45	26,018	184	56,705	283	48,564	763	45,578
Russia.....	1,084	23,283	.....	.....	.....	.....	.....	.....
United States.....	52,763	381,127	83,514	406,827	85,986	776,678	82,221	479,900
PRINCIPAL IMPORTING COUNTRIES.	.....	.....	.....	.....	.....	.....	.....	.....
Aden.....	11,619	7,739	10,355	6,416	10,027	5,991	3,593	5,830
Argentina.....	11,988	41	12,454	4,950	18,967	2,994	.....	.....
Australia.....	13,740	(¹)	15,980	(¹)	16,225	.....	.....	.....
Austria-Hungary.....	49,984	23,192	.....	.....	.....	.....	10,069	.....
Belgium.....	22,091	33	.....	30,096	66	36,126	420	.....
Canada.....	17,891	433	22,970	1,220	24,891	1,506	21,121	778
China.....	15,113	25,487	21,145	25,200	21,310	49,044	30,310	36,982
Denmark.....	8,774	100	3,682	2	30,688	499	15,900	76
Egypt.....	19,005	.....	15,027	.....	17,998	.....	19,284	.....
Finland.....	9,597	.....	3,126	2	5,493	.....	4,706	.....
France.....	63,914	26	110,971	6	108,153	375	76,615	971
Germany.....	168,437	116	.....	.....	.....	.....	496,162	924
Italy.....	47,732	3,008	42,150	1,375	63,093	618	74,246	79
Netherlands.....	57,218	3,786	831	7,270	232,655	60,018	86,797	10,175
Nigeria.....	6,050	.....	.....	.....	.....	.....	.....	.....
Norway.....	3,994	.....	5,416	.....	11,331	.....	6,753	.....
Portugal.....	6,565	279	1,747	41	8,786	76	.....	.....
Spain.....	51,026	.....	49,808	.....	70,422	.....	73,659	.....
Sweden.....	9,772	1	7,484	.....	12,899	(¹)	.....	.....
Switzerland.....	17,949	47	13,866	.....	27,742	173	29,003	112
United Kingdom.....	117,956	4,603	171,428	4,514	339,517	5,997	209,721	4,850
Other countries.....	21,799	60,742	22,447	24,324	30,052	4,115	19,451	3,954
Total.....	816,929	928,609	629,309	777,658	1,186,734	1,607,223	1,315,367	801,748

¹ Less than 500 pounds.

APPLES.

TABLE 195.—*Apples: Production and farm prices December 1, by States, 1917-1921.*

State.	Total crop (thousands of bushels).					Farm price per bushel Dec. 1 (cents).				
	1917	1918	1919	1920	1921	1917	1918	1919	1920	1921
Maine.....	4,275	2,010	4,829	1,680	4,060	95	95	117	120	115
New Hampshire.....	1,035	1,155	1,364	1,200	700	120	110	160	150	175
Vermont.....	1,248	990	1,960	993	600	130	140	175	150	195
Massachusetts.....	2,163	2,430	3,187	3,575	1,125	155	160	200	120	240
Rhode Island.....	195	189	334	390	63	150	155	195	200	250
Connecticut.....	1,251	999	1,395	2,375	758	144	155	170	125	240
New York.....	16,266	40,878	14,350	47,087	12,557	132	112	200	75	205
New Jersey.....	2,053	2,463	1,666	2,942	637	125	160	200	120	270
Pennsylvania.....	11,646	16,080	5,513	18,584	2,208	126	120	225	90	250
Delaware.....	798	714	606	822	68	110	125	200	95	220
Maryland.....	2,559	2,034	1,519	2,600	225	97	110	200	78	195
Virginia.....	11,778	10,068	8,943	13,744	708	101	124	160	90	255
West Virginia.....	4,320	5,856	3,189	8,010	420	122	117	180	125	260
North Carolina.....	4,500	3,588	2,000	6,320	593	114	130	157	105	250
South Carolina.....	1,635	1,407	216	440	293	155	205	280	184	230
Georgia.....	1,713	1,713	417	1,270	698	120	165	245	165	200
Ohio.....	5,760	7,005	2,976	13,960	3,390	150	153	262	115	225
Indiana.....	4,836	1,794	1,190	4,596	1,029	121	180	267	143	230
Illinois.....	7,518	3,459	5,673	5,863	2,351	110	185	220	140	250
Michigan.....	4,146	9,792	5,844	16,500	6,317	140	115	250	77	195
Wisconsin.....	3,090	2,811	1,545	2,250	1,050	131	155	220	170	242
Minnesota.....	1,446	996	1,336	1,350	900	155	209	250	200	260
Iowa.....	3,795	1,681	1,810	4,410	660	145	206	275	191	274
Missouri.....	8,070	4,215	5,132	4,724	480	106	164	190	170	255
South Dakota.....	336	273	168	180	125	170	235	300	260	280
Nebraska.....	1,851	525	907	797	125	140	230	250	230	270
Kansas.....	2,853	1,503	1,835	1,144	172	135	190	210	220	250
Kentucky.....	5,802	2,799	1,281	5,022	636	117	170	250	160	250
Tennessee.....	4,170	4,050	1,259	4,280	754	122	156	225	142	245
Alabama.....	1,449	1,662	577	1,186	890	140	170	250	175	200
Mississippi.....	.....	.....	218	190	145	.....	.....	235	190	240
Louisiana.....	.....	.....	44	34	35	.....	.....	200	200	200
Texas.....	357	273	487	274	274	156	160	190	200	190
Oklahoma.....	1,293	660	1,600	585	485	130	201	175	230	210
Arkansas.....	2,574	1,290	7,164	3,900	120	135	140	170	140	200
Montana.....	1,014	792	850	825	975	100	210	175	180	150
Wyoming.....	.....	.....	30	18	19	.....	.....	350	.....	250
Colorado.....	2,190	2,067	3,418	2,830	3,200	80	170	185	140	170
New Mexico.....	879	912	1,100	434	483	150	118	200	180	200
Arizona.....	129	138	123	80	47	205	240	225	250	250
Utah.....	906	786	760	1,064	1,037	80	140	170	120	130
Nevada.....	.....	.....	53	36	24	.....	.....	300	275	260
Idaho.....	3,843	1,200	3,800	3,420	4,400	95	170	180	145	130
Washington.....	19,830	16,491	25,295	21,502	29,062	125	125	155	140	125
Oregon.....	4,335	3,334	6,921	4,158	6,667	105	110	140	125	115
California.....	6,804	6,560	8,200	6,000	6,500	115	130	145	160	135
United States.....	166,749	169,625	142,086	223,677	98,097	121.7	132.8	183.6	114.8	167.8

APPLES—Continued.

TABLE 196.—*Apples: Estimated annual production of the commercial apple crop in the United States for the years 1917 to 1921, inclusive.*

[By commercial crop is meant that portion of the total crop which is sold for consumption as fresh fruit. One barrel is equivalent to three boxes.]

State.	Thousands of barrels.					State.	Thousands of barrels.				
	1917	1918	1919	1920	1921		1917	1918	1919	1920	1921
Me.....	400	226	675	230	630	Mo.....	1,128	735	1,010	924	30
N. H.....	120	122	187	170	110	S. Dak.....	4	3	3	5	0
Vt.....	132	105	203	190	116	Nebr.....	226	72	180	110	17
Mass.....	225	300	335	375	172	Kans.....	650	333	459	286	29
R. I.....	19	20	65	75	8	Ky.....	153	108	57	218	31
Conn.....	96	108	119	215	70	Tenn.....	192	218	68	204	45
N. Y.....	2,058	5,950	2,975	6,500	3,000	Ala.....	24	26	9	20	15
N. J.....	408	514	456	848	132	Tex.....	23	11	37	21	21
Pa.....	854	1,116	759	1,547	221	Okla.....	54	17	43	29	21
Del.....	191	186	155	219	14	Ark.....	400	241	1,100	724	16
Md.....	263	315	177	399	20	Mont.....	74	75	140	128	175
Va.....	1,687	1,766	1,653	1,988	136	Colo.....	701	527	828	736	812
W. Va.....	688	1,092	648	1,310	130	N. Mex.....	175	117	264	108	123
N. C.....	200	184	92	250	25	Ariz.....	16	15	15	10	6
Ge.....	120	117	35	106	58	Utah.....	184	163	121	196	198
Ohio.....	503	902	280	1,415	340	Idaho.....	873	112	1,008	756	1,349
Ind.....	456	266	137	512	109	Wash.....	4,620	4,296	7,167	5,734	8,300
Ill.....	1,554	837	712	1,309	397	Oreg.....	713	671	1,357	832	1,667
Mich.....	515	1,495	1,050	3,167	1,208	Calif.....	1,174	1,127	1,200	1,230	1,280
Wis.....	124	114	108	161	64	U. S.....	22,341	24,743	26,159	33,905	21,201
Minn.....	60	40	61	78	64						
Iowa.....	275	101	211	420	25						

TABLE 197.—*Apples: Total aggregate production (bushels) in the United States, 1889-1921.*

Year.	Production.	Year.	Production.	Year.	Production.	Year.	Production.
1889 ¹	143,105,000	1898.....	118,061,000	1906.....	216,720,000	1914.....	253,200,000
1890.....	80,142,000	1899 ¹	173,397,000	1907.....	119,560,000	1915.....	230,011,000
1891.....	198,907,000	1900.....	205,930,000	1908.....	148,910,000	1916.....	193,905,000
1892.....	120,536,000	1901.....	135,500,000	1909 ¹	146,132,000	1917.....	166,749,000
1893.....	114,773,000	1902.....	212,330,000	1910.....	141,640,000	1918.....	169,625,000
1894.....	131,648,000	1903.....	195,630,000	1911.....	214,020,000	1919.....	142,086,000
1895.....	219,600,000	1904.....	233,630,000	1912.....	235,220,000	1920.....	223,677,000
1896.....	232,600,000	1905.....	136,220,000	1913.....	145,410,000	1921.....	98,097,000
1897.....	163,728,000						

¹ Census figures.

APPLES—Continued.

TABLE 198.—*Apples: Forecasts of production, monthly, with preliminary and final estimates.*

[000 omitted.]

Year.	June.	July.	August.	September.	October.	November production estimate.	Final estimate.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1915.....	191,260	193,832	205,333	213,597	214,896	230,011	230,011
1916.....	219,726	217,593	214,572	203,037	193,507	202,245	193,905
1917.....	208,251	200,341	187,743	177,157	173,620	177,733	169,749
1918.....	203,164	195,419	198,514	195,828	193,839	197,360	189,625
1919.....	166,334	155,608	155,004	153,242	156,721	144,439	142,086
1920.....	198,908	200,421	213,187	223,241	227,978	206,219	223,677
Average.....	197,450	193,872	195,726	194,350	195,518	193,000	187,676
1921.....	109,674	102,190	109,453	106,928	109,910	109,710	¹ 98,097

¹ Preliminary.TABLE 199.—*Apples: Farm price, cents per bushel, on 1st of each month, 1910-1921.*

Year.	Jan. 1.	Feb. 1.	Mar. 1.	Apr. 1.	May 1.	June 1.	July 1.	Aug. 1.	Sept. 1.	Oct. 1.	Nov. 1.	Dec. 1.	Yearly aver.
1910.....	108.0	108.6	112.6	114.2	120.7	119.6	94.4	75.4	73.7	75.5	83.4	89.6	97.1
1911.....	108.0	117.2	121.6	131.8	139.2	137.5	115.1	83.9	71.6	68.0	69.4	72.1	103.0
1912.....	89.4	95.8	101.2	109.2	121.8	118.4	95.2	75.0	64.8	61.8	62.4	66.3	88.4
1913.....	73.4	76.4	80.4	83.7	89.5	97.6	93.6	80.6	75.8	81.0	90.0	98.1	85.0
1914.....	107.1	116.8	126.0	133.0	141.8	141.0	113.4	79.9	65.1	58.8	56.6	59.4	99.9
1915.....	68.0	71.2	73.2	76.8	85.4	90.4	84.4	70.1	59.9	62.0	69.2	69.0	73.3
1916.....	79.7	88.0	92.0	94.9	98.0	105.4	108.1	80.4	77.7	83.1	87.6	91.2	90.5
1917.....	101.1	110.0	123.3	133.0	149.8	157.2	151.1	127.0	107.8	106.8	117.5	121.5	125.5
1918.....	128.8	140.1	145.3	151.9	154.8	158.2	150.4	128.1	123.7	133.5	138.6	132.8	140.5
1919.....	147.7	160.4	175.4	201.6	224.5	237.3	197.7	174.7	162.0	171.1	182.8	183.6	184.9
1920.....	213.8	214.7	231.8	260.1	285.5	297.0	230.7	198.4	137.4	132.8	130.0	114.8	208.1
1921.....	118.6	128.4	130.5	134.4	142.2	169.2	170.0	171.2	163.6	186.9	213.9	168.5	158.1
Average, 1912-1921	112.8	120.2	127.9	137.9	149.3	157.2	144.5	118.5	103.8	107.8	114.9	110.5	125.4

TABLE 200.—*Apples: Extent and causes of yearly crop losses, 1912-1920.*

Year.	Deficient moisture.	Excessive moisture.	Floods.	Frost and freeze.	Hail.	Hot winds.	Storms.	Total climatic.	Plant disease.	Insect pests.	Animal pests.	Total.
	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
1920.....	2.2	0.8	0.2	10.2	0.8	0.2	0.7	16.6	4.4	1.9	0.1	25.9
1919.....	4.3	2.9	.1	29.1	.6	.6	1.0	39.1	5.1	2.7	.1	52.7
1918.....	7.5	.7	.2	19.1	.8	1.0	.7	30.7	1.2	2.9	.2	44.9
1917.....	4.1	3.9	.1	15.2	1.1	.3	1.1	27.0	4.7	2.8	.1	44.2
1916.....	5.4	3.2	.2	9.9	.9	.6	1.4	22.8	5.6	3.0	.1	38.6
1915.....	1.2	1.9	.2	15.8	.9	.1	1.2	21.8	5.2	3.0	.1	35.4
1914.....	6.5	.3	(¹)	6.4	.6	.4	.6	13.1	.8	5.0	.1	28.2
1913.....	10.3	.4	.4	25.3	.6	.9	.6	39.9	1.0	5.2	(¹)	53.5
1912.....	2.5	.9	.3	10.2	.7	.3	.9	16.9	4.2	3.1	.1	32.4
Average.....	4.9	1.7	.2	15.7	.8	.5	.9	25.6	3.9	3.3	.1	39.5

¹ Less than 0.05 per cent.

APPLES—Continued.

TABLE 201.—Apples: Monthly average jobbing prices per barrel and per box at 10 markets, 1921.

BARRELS.

Market.	January average.	February average.	March average.	April.		May.	
				Range	Average.	Range.	Average.
New York.....	\$4.80	\$5.01	\$6.01	\$3.50-\$10.00	\$6.79	\$4.00-\$13.50	\$8.03
Chicago.....	5.36	5.15	5.38	4.50- 8.00	5.55	5.00- 9.00	6.53
Philadelphia.....	4.05	4.17	4.44	2.85- 7.00	5.07	4.00- 7.50	6.00
Pittsburgh.....	4.59	4.73	5.06	3.25- 6.50	5.34	4.50- 8.50	6.31
St. Louis.....	4.68	4.88	5.23	4.75- 8.50	5.92	3.50-10.00	6.68
Cincinnati.....	4.46	4.65	5.31	4.25- 8.00	6.02	5.00- 7.75	6.70
St. Paul.....	5.31	5.69	5.87	4.75- 7.50	6.39	.....	.....
Minneapolis.....	6.13	6.17	6.14	6.00- 7.50	6.78	7.00- 8.25	7.51
Kansas City.....	5.58	5.97	5.73	5.75- 7.00	5.91	5.75- 6.00	5.88
Washington ¹	4.68	4.71	5.19	3.50- 7.50	5.56	4.00-10.00	6.61

Market.	September		October.		November average.	December average.
	Range	Average.	Range.	Average.		
New York.....	\$5.50-\$13.00	\$8.09	\$5.00-\$11.00	\$7.72	\$7.18	\$7.82
Chicago.....	7.00- 10.00	8.26	6.00- 10.50	8.00	7.97	8.10
Philadelphia.....	4.50- 10.50	7.44	4.00- 12.00	6.63	6.37	6.65
Pittsburgh.....	5.25- 9.00	7.22	5.00- 9.00	7.16	6.55	6.25
St. Louis.....	.....	.....	4.85- 8.25	6.48	² 5.44	.....
Cincinnati.....	7.00- 9.00	8.12	5.00- 8.50	7.64	6.98	6.72
St. Paul.....	.....	.....	7.00- 8.50	7.37	7.73	7.97
Minneapolis.....	.....	.....	7.50- 10.00	8.78	9.77	8.89
Kansas City.....	10.00- 12.00	11.00	.....	.....	.....	.....
Washington ¹	5.00- 11.00	8.88	7.50- 11.00	9.23	8.42	8.12

BOXES.

Market.	January average.	February average.	March average.	April.		May.	
				Range.	Average.	Range.	Average.
New York.....	\$3.70	\$3.90	\$3.77	\$2.50-\$6.00	\$3.98	\$2.75-\$5.00	\$3.87
Chicago.....	3.14	3.30	3.62	2.25- 5.25	3.23	2.50- 4.50	3.23
Philadelphia.....	3.44	3.83	3.06	.....	.....	2.00- 4.00	3.11
Pittsburgh.....	2.60	.....	3.11	2.25- 3.75	3.04	2.25- 4.00	3.18
Cincinnati.....	2.40	.....	.....	.....	.....	.....	.....
St. Paul.....	3.09	3.54	3.28	3.00- 3.75	3.29	3.00- 3.50	3.27
Minneapolis.....	3.18	3.45	3.41	3.00- 3.75	3.38	3.00- 3.75	3.38
Kansas City.....	2.84	3.29	3.53	3.50- 4.50	4.00	3.50- 4.50	4.00

Market.	September.		October.		November average.	December average.
	Range.	Average.	Range.	Average.		
New York.....	\$2.25-\$6.00	\$4.06	\$2.00-\$5.50	\$3.36	\$2.80	\$3.12
Chicago.....	.....	.....	2.00- 4.75	3.43	3.05	3.00
Philadelphia.....	.....	.....	1.38- 5.00	2.88	2.41	2.49
Pittsburgh.....	.....	.....	2.00- 4.75	3.22	2.85	.....
St. Paul.....	2.25- 3.75	2.81	3.00- 4.25	3.62	3.56	3.62
Minneapolis.....	2.25- 4.75	3.22	2.90- 4.75	3.73	3.57	3.77
Kansas City.....	3.75- 3.75	3.75	2.75- 4.50	3.54	3.63	3.52
Washington ¹.....	.....	.....	2.25- 5.00	3.75	3.64	3.38

¹ Sales direct to retailers.² Bulk per barrel measure.

APPLES—Continued.

TABLE 202.—Apples: Carlot shipments, by States of origin, 1917-1921.

State.	1917	1918	1919	1920	1921	State.	1917	1918	1919	1920	1921
Maine.....	1,264	319	2,300	415	3,994	Missouri.....	2,370	1,327	2,015	1,632	301
New Hamp- shire.....	268	(¹)	515	249	306	Nebraska.....	659	(¹)	164	(¹)	(¹)
Vermont.....	(¹)	(¹)	189	135	159	Kansas.....	1,132	398	534	738	(¹)
Massachusetts	315	235	407	588	229	Tennessee.....	(¹)	(¹)	(¹)	136	.....
New York....	7,486	19,293	12,496	27,657	22,031	Arkansas.....	1,412	1,175	4,368	2,676	199
New Jersey...	1,029	936	743	812	219	Montana.....	171	(¹)	498	425	676
Pennsylvania	781	1,659	1,349	2,863	916	Colorado.....	2,088	2,041	3,203	2,737	3,661
Delaware.....	349	375	495	754	(¹)	New Mexico..	634	404	965	(¹)	622
Maryland.....	410	690	602	1,538	283	Utah.....	343	452	194	610	744
Virginia.....	3,808	4,315	6,619	8,043	2,087	Idaho.....	2,988	1,100	3,324	2,881	5,911
West Virginia	1,063	2,989	2,672	4,558	1,303	Washington..	14,477	18,075	22,140	22,603	32,673
North Caro- lina.....	(¹)	(¹)	151	566	(¹)	Oregon.....	3,235	2,836	4,167	4,156	6,190
Georgia.....	262	133	(¹)	157	137	California...	1,555	3,058	4,147	4,666	5,040
Ohio.....	267	463	298	882	695	Potomac Val- ley ²	776	.....	.....	(¹)	.....
Indiana.....	230	166	(¹)	237	162	All other.....	415	1,051	474	629	483
Illinois.....	5,529	2,481	2,880	3,571	625	Total...	57,048	68,840	81,552	102,962	95,837
Michigan.....	1,366	2,869	3,443	5,973	6,188						
Iowa.....	336	(¹)	(¹)	(¹)	(¹)						

¹ Included in all other.² "Potomac Valley" includes Maryland, Pennsylvania, Virginia, and West Virginia, January to June, inclusive.

TABLE 203.—Cold-storage holdings of apples, combined in terms of thousands of barrels (i. e., 000 omitted).

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1915.....	4,293	3,585	2,491	1,343	474	108	.....	.....	.....	.....	3,689	5,441
1916.....	4,413	4,226	3,242	1,984	1,035	804	.....	.....	.....	.....	3,290	4,492
1917.....	4,132	3,385	2,442	1,545	808	265	.....	.....	.....	.....	3,296	4,659
1918.....	4,599	3,937	2,830	1,783	678	159	.....	.....	.....	.....	3,732	4,928
1919.....	4,294	3,105	1,772	956	380	125	.....	.....	.....	.....	571	5,923
1920.....	5,529	4,524	3,162	1,699	806	213	.....	.....	.....	.....	544	6,787
1921.....	6,336	5,105	3,650	2,210	1,119	445	.....	.....	.....	792	3,643	5,739

PEACHES.

TABLE 204.—*Peaches: Production and farm prices, by States, 1917-1921.*

State.	Total crop (thousands of bushels).					Farm price per bushel Sept. 15 (cents).				
	1917	1918	1919	1920	1921	1917	1918	1919	1920	1921
New Hampshire.....	46	0	39	0	29	185	.....	210	400	317
Massachusetts.....	144	0	213	4	185	200	.....	220	400	357
Rhode Island.....	.....	.....	29	3	12	.....	.....	350	415	357
Connecticut.....	390	0	195	10	290	170	.....	250	425	371
New York.....	4,823	700	1,262	2,600	1,700	140	310	270	225	255
New Jersey.....	990	832	1,653	2,134	347	170	280	270	220	335
Pennsylvania.....	1,818	720	1,100	2,000	350	170	275	300	250	345
Delaware.....	324	136	227	203	7	125	240	190	225	300
Maryland.....	1,638	235	561	692	59	120	240	190	210	300
Virginia.....	928	510	682	1,092	52	160	180	200	185	300
West Virginia.....	900	680	760	992	48	175	180	220	225	300
North Carolina.....	1,978	1,150	575	1,529	614	125	160	210	184	235
South Carolina.....	1,630	998	390	832	566	120	167	220	200	145
Georgia.....	3,668	6,092	5,895	3,799	6,550	160	150	250	171	160
Florida.....	.....	.....	148	150	130	.....	.....	250	300	210
Ohio.....	311	174	618	3,238	335	215	300	330	215	365
Indiana.....	518	0	82	405	26	210	310	320	258	352
Illinois.....	461	0	450	773	195	350	270	317	371	371
Michigan.....	711	85	448	1,500	358	200	350	316	230	290
Iowa.....	.....	0	2	100	85	220	330	330	317	341
Missouri.....	728	0	1,263	1,427	0	135	330	200	254	.....
Nebraska.....	.....	0	0	5	0	235	330	310	403	.....
Kansas.....	.....	0	214	187	24	195	350	200	400	520
Kentucky.....	1,160	110	460	988	80	150	275	210	225	300
Tennessee.....	595	833	1,285	1,500	320	120	170	180	180	230
Alabama.....	1,281	2,440	1,083	974	1,230	145	110	170	175	165
Mississippi.....	.....	.....	776	412	322	120	150	150	175	150
Louisiana.....	.....	.....	382	269	264	.....	.....	190	275	250
Texas.....	1,728	2,333	4,621	800	2,200	170	175	180	310	165
Oklahoma.....	795	167	2,924	180	360	135	190	140	250	150
Arkansas.....	1,824	217	3,340	117	435	125	100	160	235	160
Colorado.....	1,093	959	722	670	860	200	200	250	250	175
New Mexico.....	124	34	204	6	8	195	235	200	250	325
Arizona.....	.....	.....	140	48	54	.....	.....	180	350	300
Utah.....	1,365	1,050	884	471	763	130	150	160	250	171
Nevada.....	.....	.....	6	6	4	.....	.....	270	300	250
Idaho.....	211	54	293	42	150	120	190	180	290	175
Washington.....	1,717	575	1,545	155	772	100	160	170	280	182
Oregon.....	273	93	504	100	190	110	200	110	330	250
California.....	15,724	11,920	17,200	15,200	12,848	100	140	150	190	100
United States.....	48,765	33,004	53,178	45,620	32,733	.....	.....	.....	.....	.....

TABLE 205.—*Peaches: Total production (bushels) in the United States, 1899-1921.*

Year.	Production.	Year.	Production.	Year.	Production.
1899 ¹	15,433,000	1907.....	22,527,000	1915.....	64,097,000
1900.....	49,438,000	1908.....	48,145,000	1916.....	37,505,000
1901.....	46,445,000	1909 ¹	35,470,000	1917.....	48,765,000
1902.....	37,831,000	1910.....	48,171,000	1918.....	33,094,000
1903.....	28,880,000	1911.....	34,880,000	1919.....	53,178,000
1904.....	41,070,000	1912.....	52,343,000	1920.....	45,620,000
1905.....	36,634,000	1913.....	39,707,000	1921.....	32,733,000
1906.....	44,104,000	1914.....	51,100,000		

¹ Census figures.

Statistics of Peaches.

631

PEACHES—Continued.

TABLE 206.—*Peaches: Forecasts of production, monthly, with preliminary and final estimates.*

[000 omitted.]

Year.	June.	July.	August.	September production estimate.	Final estimate.
	<i>Bushel.</i>	<i>Bushel.</i>	<i>Bushel.</i>	<i>Bushel.</i>	<i>Bushel.</i>
1915.....	56,587	57,786	59,101	64,097	64,097
1916.....	42,062	42,123	40,320	36,939	37,505
1917.....	45,446	43,522	42,691	42,606	48,765
1918.....	52,800	40,251	40,921	39,149	33,094
1919.....	50,348	50,001	49,793	51,827	53,178
1920.....	45,067	45,218	45,521	44,523	45,620
1921.....	30,982	30,758	31,279	33,195	1 32,733

¹ Preliminary.

TABLE 207.—*Peaches: Farm price, cents per bushel, on 15th of each month, 1910-1921.*

Date.	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921
June 15.....		135.0	119.2				119.6	170.3	134.0	191.1	236.8	189.3
July 15.....		151.0	112.1	130.5	120.4	99.5	109.1	144.8	169.4	201.6	226.9	205.3
Aug. 15.....	110.9	138.0	108.3	126.2	105.0	85.4	114.9	143.3	178.9	199.6	235.0	216.3
Sept. 15.....	115.1	129.0	110.0	136.3	102.2	81.1	118.3	143.8	185.3	205.7	219.8	227.5
Oct. 15.....	122.8	131.0	105.0	145.0	105.3	85.2	112.1	160.6	193.2	211.7	244.2	244.3

TABLE 208.—*Peaches: Monthly average jobbing prices per 6-basket carrier and bushel at 10 markets, 1921.*

Market.	6-basket carriers.			Bushels.			Market.	6-basket carriers.			Bushels.		
	June.	July.	Aug.	June.	July.	Aug.		June.	July.	Aug.	June.	July.	Aug.
New York.....	\$3.34	\$3.04	\$5.00		\$2.62	.....	Cincinnati..	\$2.27	\$2.78	.....	\$2.42	\$3.02	.....
Chicago.....	2.47	2.95	4.23	\$2.74	3.20	.....	St. Paul.....						
Philadelphia..	2.73	2.86	4.28		2.07	.....	Minneapolis..						
Pittsburgh....	2.59	2.87	4.29		3.38	.....	Kansas City..	2.59			4.04	3.29	
St. Louis.....	2.84	3.12	4.74		3.27	.....	Washington ¹	3.04	3.29	\$4.75			

¹ Sales direct to retailers.

TABLE 209.—*Peaches: Carlot shipments, by States of origin, for 1917-1921.*

State.	1917	1918	1919	1920	1921	State.	1917	1918	1919	1920	1921
Connecticut....	178		(¹)		73	Missouri.....	163		210	(¹)	(¹)
New York.....	7,308	1,057	1,434	4,666	2,828	Tennessee....	(¹)	152	116	149	218
New Jersey....	1,218	748	1,148	1,807	(¹)	Alabama.....		171	199	126	47
Pennsylvania..	879	257	366	816	(¹)	Texas.....	825	1,579	1,940	62	864
Delaware.....	235	153	173	171	.....	Oklahoma.....	278	244	866		(¹)
Maryland.....	981	222	617	481	(¹)	Arkansas.....	1,597	190	2,335	(¹)	596
Virginia.....	125	63	137	370	.....	Colorado.....	1,347	1,111	1,334	773	1,219
West Virginia..	990	322	425	458	.....	New Mexico....	120		58		.....
North Carolina	65	56	66	343	510	Utah.....	1,146	577	1,102	402	839
South Carolina	(¹)	88	(¹)	60	31	Idaho.....	197	21	265	(¹)	103
Georgia.....	4,098	7,995	7,236	5,663	10,636	Washington...	1,920	647	2,219	204	1,097
Ohio.....	86	105	56	1,035	76	Oregon.....	65	(¹)	105	(¹)	60
Indiana.....	(¹)			103	.....	California.....	2,858	4,518	7,856	7,354	7,463
Illinois.....	(¹)	23	295	540	(¹)	All other.....	113	34	105	109	108
Michigan.....	445	76	270	2,275	198	Total.....	27,237	20,409	30,923	26,967	27,066

¹ Included in All other.

PEARS.

TABLE 210.—Pears: Production and farm prices, by States, 1917–1921.

State.	Total crop (thousands of bushels).					Farm price per bushel Nov. 1. (cents).				
	1917	1918	1919	1920	1921	1917	1918	1919	1920	1921
Maine.....	24	20	14	10	15	.....	.....	240	225	200
New Hampshire.....	19	15	17	18	17	.....	.....	240	225	250
Vermont.....	14	13	10	10	6	.....	.....	240	280	330
Massachusetts.....	71	77	84	83	45	.....	.....	240	250	300
Rhode Island.....	7	10	11	11	8	.....	175	240	250	150
Connecticut.....	29	34	57	61	50	.....	175	240	250	200
New York.....	1,708	1,352	1,830	2,700	1,525	140	150	240	105	170
New Jersey.....	590	650	402	690	185	75	110	140	110	150
Pennsylvania.....	448	513	421	845	220	120	135	230	130	245
Delaware.....	291	238	98	140	9	65	80	150	25	200
Maryland.....	525	455	287	421	35	70	100	130	60	200
Virginia.....	194	119	288	438	30	115	120	160	95	200
West Virginia.....	33	33	40	66	2	125	200	230	175	300
North Carolina.....	150	108	120	208	100	125	150	210	161	182
South Carolina.....	100	98	99	120	115	125	140	220	150	150
Georgia.....	110	188	178	173	171	135	150	180	115	165
Florida.....	16	132	13	24	40	100	.....	180	150	125
Ohio.....	334	304	157	478	126	125	170	260	120	275
Indiana.....	410	260	107	375	70	100	175	180	99	196
Illinois.....	456	302	375	603	100	95	160	170	125	270
Michigan.....	1,080	704	405	1,044	532	121	125	180	90	175
Wisconsin.....	.....	.....	20	24	16	.....	.....	190	175	320
Iowa.....	82	32	30	90	5	115	.....	190	115	600
Missouri.....	265	112	431	418	4	125	190	140	150	250
Nebraska.....	14	6	120	22	2	175	.....	250	275	390
Kansas.....	140	38	221	41	7	170	200	170	215	275
Kentucky.....	204	110	55	132	4	125	175	180	195	233
Tennessee.....	75	112	115	200	65	170	150	200	165	205
Alabama.....	80	152	163	158	180	150	130	160	161	137
Mississippi.....	30	136	125	167	167	105	105	160	200	132
Louisiana.....	52	52	59	47	38	115	120	125	175	229
Texas.....	280	246	637	338	406	160	150	140	231	190
Oklahoma.....	45	33	250	42	36	150	210	190	200	200
Arkansas.....	102	64	123	42	39	125	180	170	190	160
Montana.....	11	6	6	6	7	.....	.....	300	200	300
Colorado.....	320	194	345	336	483	210	150	220	190	220
New Mexico.....	46	56	67	32	24	.....	.....	230	250	250
Arizona.....	21	19	20	12	16	.....	384	380	250	300
Utah.....	48	51	76	87	81	120	160	250	250	250
Nevada.....	6	6	4	5	3	.....	.....	250	300	250
Idaho.....	70	60	49	58	55	150	150	175	276	200
Washington.....	595	1,300	1,781	1,140	1,710	115	115	170	130	170
Oregon.....	600	672	761	760	836	130	125	150	175	150
California.....	3,523	4,240	4,600	4,080	3,120	100	140	180	275	150
United States.....	13,281	13,362	15,101	16,805	10,705	.....	.....	.....	.....	.....

TABLE 211.—Pears: Total production (bushels) in the United States, 1909–1921.

Year.	Production.	Year.	Production.	Year.	Production.
1909 ¹	8,841,000	1914.....	12,086,000	1919.....	15,101,000
1910.....	10,431,000	1915.....	11,216,000	1920.....	16,805,000
1911.....	11,450,000	1916.....	11,874,000	1921.....	10,705,000
1912.....	11,843,000	1917.....	13,281,000		
1913.....	10,108,000	1918.....	13,362,000		

¹ Census figures.

PEARS—Continued.

TABLE 212.—Pears: Forecasts of production, monthly, with preliminary and final estimates.

[000 omitted.]

Year.	June.	July.	August.	September.	October.	November production estimate.	Final estimate.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1915.....	11,450	10,902	11,068	11,196	11,131	11,216	11,216
1916.....	11,041	10,703	10,570	10,292	10,193	10,377	11,874
1917.....	12,526	11,368	10,847	10,841	10,848	11,119	13,281
1918.....	10,345	10,322	10,239	10,337	10,189	10,312	13,362
1919.....	12,298	12,068	12,260	13,686	13,687	13,628	15,101
1920.....	13,568	13,636	14,526	14,611	14,873	15,558	16,805
1921.....	8,880	9,016	9,310	9,475	9,665	9,780	110,705

¹ Preliminary.

TABLE 213.—Pears: Farm price, cents per bushel on 15th of month, 1910-1921.

Date.	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921
Aug. 15.....		118.0	106.3	109.9	98.8	80.8	109.0	132.2	168.4	188.4	195.5	165.2
Sept. 15.....	130.9	103.8	100.0	119.3	92.8	83.8	102.7	125.0	157.8	183.0	197.9	175.1
Oct. 15.....	98.6	97.2	83.1	95.6	80.4	82.7	96.9	118.2	147.5	181.3	184.2	188.4
Nov. 15.....	100.8	85.1	79.3	93.0	77.5	89.8	93.3	116.1	140.1	182.0	170.0	194.9
Dec. 15.....	122.4	111.0	92.8	97.9	82.5	89.7	105.6		156.6	219.5	164.5	198.7

TABLE 214.—Pears: Carlot shipments, by States of origin, for 1919-1921.

State.	1919	1920	1921	State.	1919	1920	1921
New York.....	1,505	3,900	2,913	Texas.....	100	88	93
New Jersey.....	121	33	27	Colorado.....	524	604	733
Delaware.....	55	267		New Mexico.....	(¹)	35	27
Virginia.....		31	(¹)	Utah.....	(¹)	75	31
Georgia.....	51	(¹)	25	Washington.....	2,454	1,888	2,844
Ohio.....	(¹)	54	(¹)	Oregon.....	930	847	970
Indiana.....	(¹)	78		California.....	3,661	4,591	4,389
Illinois.....	324	1,140		All other.....	230	169	107
Michigan.....	127	1,142	610	Total.....	10,158	14,950	12,772
Missouri.....	73	(¹)	(¹)				

¹ Included in all other.

ORANGES.

TABLE 215.—Oranges: Production and value, 1915-1921.

Year.	United States.			Florida.			California.		
	Production (000 omitted).	Average price per box Dec. 1.	Farm value Dec. 1 (000 omitted).	Production (000 omitted).	Average price per box Dec. 1.	Farm value Dec. 1 (000 omitted).	Production (000 omitted).	Average price per box Dec. 1.	Farm value Dec. 1 (000 omitted).
	<i>Boxes.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Boxes.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Boxes.</i>	<i>Dollars.</i>	<i>Dollars.</i>
1915.....	21,200	2.39	50,692	6,150	1.88	11,562	15,050	2.60	39,133
1916.....	24,433	2.52	61,483	6,933	2.05	14,213	17,500	2.70	47,250
1917.....	10,593	2.60	27,556	3,500	2.30	8,050	7,093	2.75	19,506
1918.....	24,200	3.49	84,480	5,700	2.65	15,105	18,500	3.75	69,375
1919.....	22,528	2.67	60,202	7,000	2.50	17,500	15,528	2.75	42,702
1920.....	29,700	2.19	64,908	8,100	2.20	17,820	21,600	2.18	47,088
1921.....	30,700	2.08	63,850	8,209	1.75	14,350	22,500	2.20	49,500

CRANBERRIES.

TABLE 216.—Cranberries: Acreage, production, and farm value, by States, 1920 and 1921, and totals, 1914-1921.

[Leading producing States.]

State and year.	Acreage.		Average yield in barrels per acre.		Production (thousands of barrels).		Average farm price per barrel Dec. 1.		Farm value (thousands of dollars).	
	1920	1921	1920	1921	1920	1921	1920	1921	1920	1921
Massachusetts.....	13,000	13,000	21.5	12.7	280	165	\$13.50	\$20.00	3,780	3,300
New Jersey.....	10,000	10,000	13.3	17.9	133	179	10.50	14.00	1,395	2,505
Wisconsin.....	2,000	2,000	17.9	14.4	36	29	9.40	13.30	338	386
Total.....	25,000	25,000	18.0	14.9	449	373	12.28	16.60	5,514	6,192
1919.....	25,000		22.0		549		8.37		4,597	
1918.....	25,400		13.9		352		10.77		3,791	
1917.....	18,200		13.7		249		10.21		2,550	
1916.....	26,200		18.0		471		7.32		3,449	
1915.....	23,100		19.1		441		6.59		2,908	
1914.....	22,000		31.7		697		3.97		2,766	

TABLE 217.—Cranberries: Forecasts of production, monthly, with preliminary and final estimates.

Year.	September.	October.	November production estimate.	Final estimate.
	Barrels.	Barrels.	Barrels.	Barrels.
1918.....	495,000	488,000	374,000	352,000
1919.....	637,000	559,000	546,000	549,000
1920.....	474,000	419,000	432,000	449,000
1921.....	422,000	388,000	376,000	1 373,000

¹ Preliminary.

FRUITS AND NUTS.

TABLE 218.—Fruits and nuts: Production and value in California, 1919-1921.

[Estimates of the agricultural statistician for California.]

Crop.	Production in tons.			Price per ton.			Total value.		
	1919	1920	1921	1919	1920	1921	1919	1920	1921
Almonds.....	7,250	5,500	5,500	\$440.00	\$360.00	\$320.00	\$3,190,000	\$1,980,000	\$1,760,000
Apriots.....	175,000	116,000	105,000	80.00	85.00	50.00	14,000,000	9,350,000	5,250,000
Cherries.....	12,400	17,500	13,000	150.00	200.00	125.00	1,860,000	3,500,000	1,625,000
Figs.....	12,000	12,300	8,000	150.00	90.00	145.00	1,800,000	1,107,000	1,160,000
Grapes, raisin.....	182,500	177,000	130,000	210.00	235.00	190.00	38,325,000	41,595,000	24,700,000
Grapes, wine.....	400,000	375,000	310,000	40.00	65.00	82.00	16,000,000	24,375,000	25,420,000
Grapes, table.....	200,000	190,000	125,000	75.00	75.00	75.00	15,000,000	14,250,000	9,375,000
Lemons, boxes ¹	3,499,066	4,955,000				² 2.50			
Oranges, boxes ¹	15,528,278	21,725,000	22,500,000	² 2.75	² 2.75	² 2.20	42,702,764	59,743,750	49,500,000
Olives.....	8,800	8,000	8,200		95.00	90.00		760,000	738,000
Plums.....	42,000	35,000	40,000	60.00	90.00	53.00	2,520,000	3,150,000	2,120,000
Prunes.....	135,000	97,250	90,000	240.00	130.00	130.00	32,400,000	19,450,000	11,700,000
Walnuts.....	28,100	21,000	19,500	550.00	400.00	400.00	15,455,000	8,400,000	7,800,000

¹ Representing the commercial crop year beginning Oct. 1, i. e., the numbers for 1921 represent the fruit that set during the season of 1921 and will be picked and marketed between Oct. 1, 1921, and Oct. 1, 1922.² Per box.

HOPS.

TABLE 219.—Hops: Area and production in undermentioned countries, 1909-1920.

Country.	Area.				Production.			
	Average 1909-1913 ¹	1918	1919	1920	Average 1909-1913 ¹	1918	1919	1920
NORTH AMERICA.	1,000 acres.	1,000 acres.	1,000 acres.	1,000 acres.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.
United States ²	26	21	28	53,655	21,481	24,970	34,280	
Canada	1			1,208				
Total North America				54,863				
EUROPE.								
Austria	³ 50	(⁴)	(⁴)	(⁴)	³ 27,523	139	⁵ 104	90
Croatia Slavonia ²	1				263			
Belgium	6		3	4	7,096		3,180	5,040
Czechoslovakia		22	⁵ 21	21		4,549	⁵ 9,590	11,610
France	³ 7	⁴ 3	4	10	³ 6,948	⁴ 924	1,855	9,640
Germany	⁴ 67	³ 27	20	29	³ 30,105	³ 1,833	8,532	13,283
Hungary	³ 5			1	⁴ 2,932			
Russia					³ 11,765			
United Kingdom:								
England	36	16	17	21	33,058	14,560	21,168	31,472
Yugoslavia							⁵ 1,323	⁵ 1,653
Total Europe					119,690			
Australia	1	1	1	1	1,564	2,103	1,858	1,462
Grand total					176,117			

¹ Five-year average, except in a few cases where five-year statistics were unavailable

² Four States.

³ Old boundaries

Less than 500.

⁴ Unofficial.

⁵ Bohemia, Moravia, and Silesia.

TABLE 220.—Hops: World production so far as reported, 1895-1920.

Year	Production	Year.	Production.	Year	Production.	Year.	Production.
	<i>Pounds</i>		<i>Pounds</i>		<i>Pounds.</i>		<i>Pounds.</i>
1895	204,894,000	1902	170,063,000	1909	128,173,000	1916	82,143,000
1896	168,509,000	1903	174,457,000	1910	188,951,000	1917	81,104,000
1897	189,219,000	1904	178,802,000	1911	163,810,000	1918	45,589,000
1898	166,100,000	1905	277,260,000	1912	224,493,000	1919	71,257,000
1899	231,563,000	1906	180,998,000	1913	174,642,000	1920	106,877,000
1900	174,683,000	1907	215,923,000	1914	224,179,000		
1901	201,902,000	1908	230,220,000	1915	163,084,000		

HOPS—Continued.

TABLE 221.—Hops: Acreage, production, and farm value, by States, in 1920 and 1921, and totals, 1915-1921.

[Leading producing States]

State and year.	Acreage.		Average yield in pounds per acre.		Production (thousands of pounds)		Average farm price, cents per pound Dec. 1.		Farm value (thousands of dollars).	
	1920	1921	1920	1921	1920	1921	1920	1921	1920	1921
New York.....	1,000	1,000	950	580	950	580	60	40	570	232
Washington.....	3,000	3,000	1,910	1,700	5,730	5,100	35	20	2,006	1,020
Oregon.....	12,000	12,000	725	770	8,700	9,240	35	25	3,045	2,310
California.....	12,000	12,000	1,575	1,185	18,900	14,220	35	25	6,615	3,555
Total.....	28,000	28,000	1,224.3	1,040.7	34,280	29,140	35.7	24.4	12,236	7,117
1919.....	21,000		1,189.0		24,970		77.6		19,376	
1918.....	25,900		829.4		21,481		19.3		4,150	
1917.....	29,900		982.9		29,388		33.3		9,795	
1916.....	43,900		1,152.5		50,595		12.0		6,073	
1915.....	44,653		1,186.6		52,986		11.7		6,203	

TABLE 222.—Hops: Forecasts of production, monthly, with preliminary and final estimates.

Year	July.	August.	September.	October production estimate.	Final estimate.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
1918.....	32,494	30,473	31,325		21,481
1919.....	33,912	34,906	34,813	33,121	24,970
1920.....	38,764	37,696	38,685	38,893	34,280
1921.....	32,471	31,196	29,479	29,750	¹ 29,140

¹ Preliminary.

TABLE 223.—Hop consumption and movement, 1910-1921.

[The total hop movement of the United States for the last 12 years is shown. The figures on the quantity consumed by brewers have been compiled from the records of the Treasury Department; exports and imports are as reported by the Department of Commerce.]

Year ending June 30—	Consumed by brewers.	Exports.		Total of brewers' consumption and exports.	Imports.	Net domestic movement.
		Domestic.	Foreign.			
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
1910.....	43,293,764	10,589,254	14,590	53,897,608	3,200,560	50,697,048
1911.....	45,068,811	13,104,774	17,974	58,191,559	8,557,531	49,634,028
1912.....	42,436,665	12,190,663	35,869	54,663,197	2,991,125	51,672,072
1913.....	44,237,735	17,591,195	35,859	61,864,789	8,494,144	53,370,645
1914.....	43,987,623	21,262,896	30,224	68,280,743	5,382,025	62,898,718
1915.....	38,839,294	16,210,443	16,947	55,066,684	11,651,332	43,415,352
1916.....	37,451,610	22,409,818	134,571	59,995,999	675,704	59,320,295
1917.....	41,949,225	4,874,876	26,215	46,850,316	236,849	46,613,467
1918.....	33,481,415	3,494,579	37,823	37,013,817	121,288	36,892,529
1919.....	13,924,650	7,466,952	4,719	21,396,321	6	21,396,315
1920.....	¹ 6,440,894	30,779,508	104,198	37,324,600	2,696,264	34,628,336
1921.....	¹ 5,988,982	22,206,028	827,803	29,022,813	4,807,998	24,214,815

¹ Including hops used to make "cereal beverages."

HOPS—Continued.

TABLE 224.—Hops: Wholesale price per pound, 1921-1913.

Date.	New York, choice, State.			San Francisco. ¹			Date.	New York, choice, State.			San Francisco. ¹		
	Low.	High.	Average.	Low.	High.	Average.		Low.	High.	Average.	Low.	High.	Average.
1921.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	1920.....	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
January.....	42	45	43.5	33	35	34.0	1920.....	41	105	80.2	33	75	61.7
February....	38	44	41.5	33	35	34.0	1919.....	37	85	59.8	34	84	56.7
March.....	37	40	38.9	33	35	34.0	1918.....	23	54	37.9	19	22½	19.4
April.....	36	40	38.4	33	35	34.0	1917.....	34	90	.....	6	40	.....
May.....	28	40	32.9	12	35	30.4	1916.....	15	55	.....	7	12½	.....
June.....	28	30	29.0	12	20	16.0	1915.....	13	30	.....	10	15	.....
July.....	26	30	28.0	12	20	16.0	1914.....	23	50	.....	10	30	.....
August.....	26	30	28.0	12	20	16.0	1913.....	17	48	.....	19	30	.....
September...	28	50	39.9	17	22	19.5							
October.....	42	45	43.3	17	22	19.5							
November...	40	42	41.3	17	22	19.5							
December...	36	42	39.7	17	22	19.5							
	26	50	37.0	12	35	24.4							

¹ Called "Washington" hops in 1916; "Oregon" hops for January-March, 1919; "1920 crop" 1920; "1920 crop," 1921.

TABLE 225.—Hops: International trade, calendar years 1909-1920.

[Lupulin and hopfenmehl (hop meal) are not included with hops in the data shown. See "General note, Table 125.]"

Country.	Average, 1909-1913.		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORT- ING COUNTRIES.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.
Austria-Hungary.....	938	18,333	.....	.....	.....	.....	.....	.....
Germany.....	7,688	17,564	.....	.....	.....	.....	87	21,624
New Zealand.....	61	352	29	225	28	248	19	181
Russia.....	1,258	2,348	.....	.....	.....	.....	.....	.....
United States.....	6,235	15,416	77	3,670	467	20,798	5,949	25,624
PRINCIPAL IMPORT- ING COUNTRIES.								
Australia.....	1,106	22	598	195	276	23	.....	.....
Belgium.....	6,915	4,814	.....	.....	8,089	2,653	15,681	12,222
British India.....	246	.....	532	.....	480	.....	122	.....
British South Africa.....	391	(¹)	570	.....	552	.....	476	.....
Canada.....	1,396	176	849	15	1,780	7	1,657	63
Denmark.....	1,027	21	2,147	5	1,417	1	526	28
France.....	5,436	335	810	612	2,859	1,620	5,877	4,170
Netherlands.....	2,938	1,405	4,612	26	1,178	1,471	1,562	3,013
Sweden.....	987	1	4,151	4	834	17	997	.....
Switzerland.....	1,257	32	300	.....	166	.....	153	.....
United Kingdom.....	21,028	2,162	.....	775	17,258	292	51,049	411
Other countries.....	4,062	10	4,005	2	3,835	2	2,286	5
Total.....	62,969	62,941	18,680	5,529	39,219	27,132	86,441	67,341

Less than 500 pounds.

² 3 year average.

³ 1 year.

BEANS.

TABLE 226.—Beans: Area and production in undermentioned countries, 1909-1920.

Country.	Area.				Production.			
	Average, ¹ 1909-1913.	1918	1919	1920	Average, ¹ 1909-1913.	1918	1919	1920
NORTH AMERICA								
United States (6 States).....	1,000 acres. 788	1,000 acres. 1,744	1,000 acres. 2 1,000	1,000 acres. 2 838	1,000 bushels. 11,166	1,000 bushels. 17,397	1,000 bushels. 2 13,319	1,000 bushels. 2 9,077
Canada:								
Nova Scotia.....	1	9	7	5	32	143	87	86
New Brunswick..	2	5	7	4	21	86	106	69
Quebec.....	6	110	43	36	125	1,807	853	645
Ontario.....	42	100	23	23	796	1,388	289	381
Other.....		4	4	4		80	54	84
Total Canada....	51	228	84	72	974	3,564	1,389	1,265
Mexico.....						2 4,858		
SOUTH AMERICA.								
Argentina.....	65							
Brazil.....								
Chile.....	79	2 132			1,398	2 1,386	2 2,547	2 1,713
EUROPE.								
Austria.....	4 648	9	7	7	4 9,666	82	73	85
Croatia Slavonia 2 4	25				265			
Do. 4	472				2,011			
Belgium.....	21				604			
Bulgaria 4	178				1,895			
Denmark.....	9	7 20	7 24	7 38	369	7 417	7 644	7 1,357
France.....	2 554	478	513	565	2 518	5,283	5,681	8,250
Hungary 4 6	44				599			
Do. 4 6	1,471				6,917			
Italy.....	2,023	1,065	2,302	2,318	21,038	15,362	14,539	12,452
Luxemburg.....	4				73			
Netherlands.....	64	61	38		1,853	2,095		
Poland.....	29		2 141	2 198	505		2 1,802	2 2,689
Rumania 5	4 93		69		4 1,385		870	
Do. 6	4 1,265		1,180		3,630		3,115	
Russia, proper 4	523				6,027			
Northern Caucasia 4	4				58			
Serbia 4	25				1,676			
Spain.....	1,132	1,278	1,266	1,243	11,908	14,025	12,812	13,661
Sweden.....	10	6	6	5	174	111	151	120
United Kingdom:								
England.....	276	248	282	244	8,015	7,032	6,776	7,600
Wales.....	1	3	2	2	33	78	62	55
Scotland.....	9	7	7	6	318	266	262	215
Ireland.....	2	10 2	10 2		67	75		
Total United Kingdom.....	288	260	293		8,433	7,451		
Yugo-Slavia.....								
ASIA.								
British India.....	13,156	16,255	7,367		143,360	165,275	71,701	
Japanese Empire:								
Japan.....	1,598	1,462			23,175	23,998		
Formosa.....	79				657			
Chosen (Korea)...	1,229				14,240			
Total Japanese Empire.....	2,906				38,072			
Russia (9 govern- ments) 4	22				225			
AFRICA.								
Algeria.....	110				1,132			
Egypt.....	544	494	524	534		12,816	10,283	
AUSTRALASIA.								
Australia.....	40	2			794	43		

¹ Five-year average, except in a few cases where statistics were unavailable.² Seven States.³ Unofficial.⁴ Old boundaries.⁵ Grown alone.⁶ Grown with corn.⁷ Includes pulse.⁸ Former Russian Poland, Western Galicia, and Posen.⁹ Republic of Poland.¹⁰ Includes peas.

BEANS—Continued.

TABLE 227.—Beans (dry): Acreage, production, and value, by States, 1910 and 1921, and totals, 1914-1921.

[Leading producing States]

State and year.	Thousands of acres.		Average yield in bushels per acre.		Production (thousands of bushels).		Average farm price per bushel Nov. 15.		Farm value (thousands of dollars).	
	1920	1921	1920	1921	1920	1921	1920	1921	1920	1921
New York	54	67	14.0	16.0	756	1,072	\$3.50	\$2.95	2,646	3,162
Michigan	286	263	13.0	11.3	3,718	2,972	2.50	2.40	9,295	7,133
Colorado	52	38	8.0	9.0	416	342	3.15	2.70	1,310	923
New Mexico	111	105	7.5	7.9	855	830	3.04	2.50	2,599	2,075
Arizona	7	8	6.3	8.5	44	68	4.10	3.50	180	238
Idaho	25	18	11.5	12.0	288	216	3.04	2.95	876	637
California	300	272	10.0	13.3	3,000	3,618	3.30	2.80	9,900	10,130
Total	838	771	10.8	11.8	9,077	9,118	2.95	2.66	26,806	24,298
1919	1,060		12.6		13,349		4.20		56,811	
1918	1,744		10.0		17,397		5.28		91,883	
1917	1,821		8.8		16,045		6.50		104,350	
1916	1,107		9.7		10,715		5.10		54,686	
1915	928		11.1		10,321		2.59		26,771	
1914	876		13.2		11,586		2.26		26,213	

TABLE 228 —Beans: Forecast of production, monthly, with preliminary and final estimates.

[000 omitted.]

Year.	July.	August.	September.	October production estimate.	Final estimate.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1917	22,141	19,443	19,969	15,814	16,045
1918	19,791	19,497	19,894	17,802	17,397
1919	12,802	11,638	11,363	12,690	13,349
1920	9,451	9,074	9,101	9,364	9,077
1921	8,982	8,783	8,780	9,332	9,118

TABLE 229.—Beans: Farm price per bushel on 15th of each month, 1910-1921.

Year.	Jan. 15.	Feb. 15.	Mar. 15.	Apr. 15.	May 15.	June 15.	July 15.	Aug. 15.	Sept. 15.	Oct. 15.	Nov. 15.	Dec. 15.
1910	\$2.23	\$2.23	\$2.17	\$2.16	\$2.17	\$2.20	\$2.34	\$2.27	\$2.28	\$2.25	\$2.14	\$2.20
1911	2.20	2.23	2.17	2.20	2.17	2.19	2.23	2.20	2.26	2.27	2.34	2.42
1912	2.38	2.38	2.42	2.37	2.52	2.62	2.47	2.40	2.38	2.34	2.25	2.31
1913	2.26	2.19	2.10	2.11	2.18	2.23	2.22	2.11	2.08	2.25	2.20	2.12
1914	2.17	2.09	2.05	2.11	2.31	2.23	2.22	2.54	2.46	2.17	2.28	2.40
1915	2.63	3.02	2.89	2.81	2.93	2.87	2.75	2.67	2.70	2.93	3.03	3.30
1916	3.47	3.43	3.34	3.42	3.56	3.72	5.09	4.59	4.60	4.47	5.53	5.77
1917	5.71	6.07	6.49	7.37	8.94	8.99	8.07	7.29	6.69	7.48	7.33	7.00
1918	7.00	7.08	6.95	6.95	6.67	6.28	5.88	6.11	5.67	5.52	5.46	4.86
1919	4.98	4.52	4.40	4.44	4.19	4.39	4.25	4.30	4.36	4.27	4.42	4.41
1920	4.70	4.47	4.32	4.41	4.36	4.49	4.47	4.17	3.83	3.47	3.27	2.99
1921	2.95	2.85	2.89	2.69	2.73	2.82	2.75	2.83	2.99	2.87	2.85	2.83

BEANS—Continued.

TABLE 230.—Beans: Wholesale price per 100 pounds, 1921–1913.

Date.	Boston, pea.			Chicago, pea. ¹			Detroit, pea.			San Francisco, small white.		
	Low.	High.	Average.	Low.	High.	Average.	Low.	High.	Average.	Low.	High.	Average.
1921.	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>
January.....	4.75	5.25	4.98	4.25	4.50	4.38	4.00	4.00	4.00	3.75	4.00	3.82
February.....	4.25	5.00	4.68	4.25	4.75	4.55	3.75	4.00	3.89	3.50	4.00	3.86
March.....	4.50	4.85	4.64	4.25	4.75	4.56	3.50	3.80	3.68	3.50	4.00	3.68
April.....	4.25	4.75	4.52	3.60	4.50	4.06	3.50	3.75	3.60	3.30	3.75	3.49
May.....	4.25	4.75	4.44	3.60	4.50	4.01	3.60	4.00	3.70	3.20	3.60	3.39
June.....	4.50	4.75	4.64	4.00	4.50	4.26	3.50	3.75	3.60	3.25	3.60	3.42
July.....	4.50	4.75	4.58	3.80	4.75	4.02	3.30	4.00	3.47	3.25	4.00	3.68
August.....	4.50	5.50	4.96	4.50	5.50	4.84	3.85	4.75	4.41	3.75	4.65	4.22
September.....	5.25	5.50	5.41	5.10	5.50	5.34	4.30	4.78	4.58	4.40	4.75	4.55
October.....	5.00	5.25	5.24	4.92 ¹	5.50	5.22	4.20	4.55	4.39	4.50	4.80	4.68
November.....	5.25	5.50	5.34	5.00	5.50	5.17	4.20	4.45	4.30	4.50	4.90	4.79
December.....	5.00	5.25	5.08	4.75	5.25	4.94	4.20	4.30	4.27	4.60	4.90	4.79
Year.....	4.25	5.50	4.88	3.60	5.50	4.61	3.30	4.78	3.99	3.20	4.90	4.03
1920.....	4.75	8.25	6.98	4.25	9.25	6.76	3.90	7.90	6.25	3.75	6.75	5.72
1919.....	6.00	10.00	7.74	6.50	9.50	7.92	6.50	9.00	7.54	5.75	8.90	7.05
1918.....	9.00	14.00	12.08	8.25	15.00	11.49	8.63	13.25	10.75	8.90	12.75	11.64
1917.....	6.50	15.00	9.24	6.40	14.50	9.09	6.25	13.25	8.60	10.50	16.00	13.20
1916.....	3.80	7.25	4.96	3.00	8.00	4.24	3.50	7.00	4.82	6.25	11.50	8.05
1915.....	2.85	4.10	3.38	2.40	4.10	3.19	2.00	3.60	3.06	4.50	6.40	5.30
1914.....	2.10	3.10	2.10	1.60	3.10	2.22	1.80	2.90	2.22	4.00	6.00	4.98
1913.....	2.15	2.60	2.36	1.15	2.50	1.81	1.75	2.20	2.50	4.50	6.00	5.16

¹ Hand picked, choice to fancy.

SOY BEANS.

TABLE 231.—Soy beans: Acreage, production, and value, by States, 1920 and 1921, and totals, 1917–1921.

(Leading producing States.)

State and year.	Thousands of acres.		Average yield in bushels per acre.		Production (thousands of bushels).		Average farm price per bushel Nov. 15.		Farm value (thousands of dollars).	
	1920	1921	1920	1921	1920	1921	1920	1921	1920	1921
Virginia.....	11	12	19.0	13.5	209	162	\$3.10	\$2.60	648	421
North Carolina.....	91	113	16.5	18.0	1,502	2,034	2.78	2.05	4,176	4,170
South Carolina.....	1	1	10.0	10.0	10	10	3.00	2.10	30	21
Georgia.....	1	1	11.0	13.0	11	13	3.35	2.15	37	28
Ohio.....	8	8	8.0	7.0	64	56	4.00	3.00	256	168
Indiana.....	3	4	14.0	11.0	42	44	5.00	2.70	210	119
Illinois.....	4	6	11.5	9.8	46	59	3.92	1.42	180	84
Michigan.....	8	7	12.0	8.0	96	56	4.00	3.00	384	168
Wisconsin.....	4	4	7.0	8.2	28	33	4.00	2.65	112	87
Missouri.....	3	4	16.0	14.0	48	56	2.60	2.50	125	140
Kentucky.....	4	6	15.0	13.0	60	78	3.50	2.50	210	195
Tennessee.....	8	8	7.5	8.0	52	64	2.85	2.20	148	141
Alabama.....	8	9	9.8	12.6	78	113	4.00	2.20	312	249
Mississippi.....	2	2	10.0	11.0	20	22	3.00	2.20	60	48
Louisiana.....	1	1	12.5	15.0	12	15	3.17	2.75	38	41
Total.....	156	186	14.6	15.1	2,278	2,815	3.04	2.16	6,926	6,080
1919.....	153		13.2		2,015		3.33		6,814	
1918.....	169		17.7		2,997		3.20		9,590	
1917.....	154		14.8		2,283		2.86		6,529	

SOY BEANS—Continued.

TABLE 232.—Soy beans: Farm price per bushel on 15th of month, 1913-1922.

Date.	1913- 1914	1914- 1915.	1915- 1916.	1916- 1917.	1917- 1918.	1918- 1919.	1919- 1920.	1920- 1921	1921- 1922.
Oct. 15.....	\$1.96	\$2.08	\$1.88	\$2.13	\$2.78	\$3.36	\$3.34	\$3.11	\$2.20
Nov. 15.....	1.57	2.15	2.08	2.13	2.86	3.20	3.35	3.00	2.22
Dec. 15.....	1.72	2.24	2.23	2.18	3.33	3.29	3.44	2.38	2.08
Jan. 15.....	1.96	2.35	2.31	2.20	3.47	3.60	3.76	2.18	2.11
Feb. 15.....	1.80	2.26	2.39	2.45	3.82	3.60	4.05	2.17	2.16

COWPEAS.

TABLE 233.—Cowpeas: Acreage, production, and value, by States, 1920 and 1921, and totals, 1917-1921.

[Leading producing States.]

State and year.	Thousands of acres.		Average yield in bushels per acre.		Production (thousands of bushels).		Average farm price, cents per bushel Nov. 15.		Farm value (thousands of dollars).	
	1920	1921	1920	1921	1920	1921	1920	1921	1920	1921
Virginia.....	21	21	11.0	10.0	231	210	290	260	670	546
North Carolina.....	110	93	9.0	8.2	990	763	257	260	2,514	1,984
South Carolina.....	252	302	9.0	6.0	2,268	1,812	225	177	5,103	3,307
Georgia.....	150	165	9.0	9.4	1,350	1,551	217	160	2,930	2,482
Florida.....	6	6	8.0	10.0	48	60	275	240	132	144
Indiana.....	6	8	16.0	15.0	96	120	300	262	288	314
Illinois.....	18	17	6.5	6.6	117	112	284	135	332	151
Missouri.....	10	15	12.0	10.0	120	150	200	220	240	330
Kentucky.....	12	13	12.0	11.0	144	143	375	178	510	255
Tennessee.....	16	16	5.0	6.0	80	96	240	185	192	178
Alabama.....	162	188	9.7	8.5	1,571	1,598	200	145	3,142	2,317
Mississippi.....	100	150	8.0	10.0	800	1,500	212	170	1,696	2,550
Louisiana.....	24	23	7.3	7.8	175	179	261	223	457	399
Texas.....	65	70	11.0	12.0	715	840	285	173	2,038	1,453
Oklahoma.....	5	5	6.9	7.4	34	37	230	150	78	56
Arkansas.....	33	41	5.0	10.0	165	410	245	145	401	594
Total.....	990	1,133	9.0	8.5	8,904	9,581	233.4	177.0	20,786	16,960
1919.....	959		6.3		6,026		274.4		16,533	
1918.....	2,003		6.2		12,427		231.4		28,756	
1917.....	1,829		7.0		12,787		227.1		29,039	

TABLE 234.—Cowpeas: Farm price, cents per bushel, on 15th of month, 1915-1921.

Year.	Jan. 15.	Feb. 15.	Mar. 15.	Apr. 15.	May 15.	June 15.	July 15.	Aug. 15.	Sept. 15.	Oct. 15.	Nov. 15.	Dec. 15.
1915.....		187.0	198.8	203.7	201.9	194.5	179.8	174.4	155.4	156.0	151.4	151.8
1916.....	156.3	157.2	153.7	150.2	148.8	140.0	135.1	141.3	142.4	148.1	161.6	177.0
1917.....	192.2	210.0	231.8	253.4	293.1	309.1	303.2	265.4	217.0	219.5	227.1	237.5
1918.....	262.2	292.5	301.5	292.8	283.3	257.4	243.4	241.3	226.2	233.9	231.4	237.6
1919.....	238.9	252.1	248.8	267.6	292.3	343.9	342.8	310.3	269.4	260.9	270.7	280.6
1920.....	312.9	372.4	391.0	421.4	484.4	483.7	470.8	422.7	368.8	273.7	243.4	229.0
1921.....	197.2	204.2	204.7	215.5	242.7	265.1	287.2	240.9	193.7	201.2	184.8	176.1

PEAS.

TABLE 235.—*Peas: Area and production in undermentioned countries, 1909-1920.*

Country.	Area.				Production			
	Average ¹ 1909- 1913	1918	1919	1920	Average ¹ 1909-1913	1918	1919	1920
	1,000 acres. (²)	1,000 acres. (²)	1,000 acres. (²)	1,000 acres. (²)	1,000 bushels. (²)	1,000 bushels. (²)	1,000 bushels. (²)	1,000 bushels. (²)
NORTH AMERICA.								
United States.....								
Canada:								
Prince Edward Island....	1	(³)	(³)	(³)	4	7	8	3
Nova Scotia.....	1	2	2	1	14	33	38	21
New Brunswick.....	1	4	5	3	21	60	69	43
Quebec.....	33	107	82	61	520	1,664	1,225	1,035
Ontario.....	267	114	127	109	4,482	2,381	1,817	2,210
Manitoba.....			6	4			81	62
Saskatchewan..	(³)	4	5	2	7	85	87	36
Alberta.....	(³)	2	2	3	7	36	29	49
British Columbia.....	1	2	2	3	42	47	52	69
Total Canada.....	304	235	231	186	5,007	4,313	3,406	3,528
SOUTH AMERICA								
Chile.....	4 26	6 26			4 387	6 544	6 536	6 429
EUROPE.								
Austria.....		4	6 4			50	6 59	
Croatia-Slavonia ^{4 7}	12				159			
Belgium.....	12				390			
France.....	4 73	33	24		4 7 1,380	464	515	
Hungary ^{6 7}	32				427			
Italy.....					3,829		456	625
Luxemburg ⁶	2				34			
Netherlands.....	65	88	80		1,581	2,032		
Poland.....	383		8 9 141	139	5,428		8 9 1,802	1,796
Rumania.....	6 7 42		16		6 7 973		247	
Russia proper ⁷	2,628				27,973			
Northern Caucasia ⁷	11				80			
Spain.....	1,071	6 941			10,402	6 8 143		
Sweden.....	47	89	96	94	1,227	1,854	2,127	2,094
United Kingdom:								
England.....	152	127	132	129	3,974	5,496	5,520	5,536
Wales.....	1	1	1	1	14	15	11	12
Scotland.....	1		(⁸)	(⁸)	14	2	2	
Ireland.....		10 2	10 2		8	12		
Total United Kingdom..	154	130	135		4,010	3,525		
ASIA.								
Japan.....	91	169			1,804	2,736		
Russia (9 governments) ⁷	94				794			
AUSTRALASIA.								
Australia.....	(¹¹)	10 43	57		(¹¹)	10 744	815	
New Zealand.....	16		18	14	507	313	506	369

¹ Five year average except in a few cases where statistics were unavailable.² Not separately stated.³ Less than 500.⁴ Includes chick peas, lentils, and vetches.⁵ Unofficial.⁶ Includes lentils.⁷ Old boundaries.⁸ Includes beans and vetches.⁹ Former Russian Poland, Western Galicia and Posen.¹⁰ Includes beans.¹¹ Included under beans.

BROOM CORN.

TABLE 236.—*Broom corn: Acreage, production, and value, by States, 1920 and 1921, and totals, 1915-1921.*

[Leading producing States.]

State and year.	Acreage.		Average yield in pounds per acre.		Production (tons).		Average farm price per ton Nov. 15.		Farm value (thousands of dollars).	
	1920	1921	1920	1921	1920	1921	1920	1921	1920	1921
Illinois.....	20,000	16,000	500	550	5,000	4,400	\$175.00	\$125.00	875	550
Missouri.....	3,500	3,400	465	550	800	900	145.00	125.00	116	112
Kansas.....	20,000	10,000	375	345	3,800	1,700	89.00	55.00	338	94
Texas.....	33,000	25,000	230	310	3,800	3,900	118.00	75.00	448	282
Oklahoma.....	178,000	128,000	216	300	19,200	19,200	129.00	64.00	2,477	1,229
Colorado.....	7,000	12,000	370	400	1,300	2,400	70.00	45.00	91	108
New Mexico.....	14,000	13,000	372	394	2,600	2,600	100.00	65.00	260	169
Total.....	275,500	207,400	265.0	338.4	36,500	35,100	126.16	72.76	4,605	2,554
1910.....	352,000		303.4		53,400		154.57		8,254	
1918.....	366,000		340.4		62,300		233.87		14,570	
1917.....	345,000		332.8		57,400		292.75		16,804	
1916.....	235,200		329.3		38,726		172.75		6,690	
1915.....	230,100		454.1		52,242		91.67		4,789	

TABLE 237.—*Broom corn: Farm price per ton on 15th of each month, 1910-1921.*

Year.	Jan. 15.	Feb. 15.	Mar. 15.	Apr. 15.	May 15.	June 15.	July 15.	Aug. 15.	Sept. 15.	Oct. 15.	Nov. 15.	Dec. 15.
1910.....	\$190	\$197	\$200	\$204	\$199	\$151	\$180	\$142	\$139	\$108	\$96	\$93
1911.....	81	80	78	74	81	69	68	72	92	121	124	108
1912.....	100	86	99	101	83	79	85	83	77	70	69	57
1913.....	49	56	57	58	53	61	57	91	106	102	100	92
1914.....	94	95	91	89	85	88	88	91	77	67	66	58
1915.....	66	78	68	71	75	77	79	83	75	86	92	101
1916.....	104	104	104	96	101	102	103	120	129	168	173	172
1917.....	184	201	212	227	252	223	194	308	240	270	296	280
1918.....	249	254	242	222	206	222	235	232	300	265	205	172
1919.....	169	141	174	149	152	106	119	124	154	162	161	163
1920.....	163	123	130	145	146	145	113	142	125	126	123	88
1921.....	70	71	72	69	66	76	75	67	68	72	68	86

TABLE 238.—*Broom corn: Forecasts of production, monthly, with preliminary and final estimates.*

Year.	July.	August.	Sep- tember.	October production estimate.	Final estimate.
	Tons.	Tons.	Tons.	Tons.	Tons.
1917.....	55,310	59,300	59,300	59,100	57,400
1918.....	70,500	62,900	56,100	52,100	57,800
1919.....	56,500	59,100	60,300	55,800	53,400
1920.....	43,400	45,400	45,500	37,000	36,500
1921.....	32,200	32,700	33,100	30,200	35,100

¹ Preliminary.

GRAIN SORGHUMS.¹TABLE 239.—*Grain sorghums: Acreage, production, and value, by States, 1920 and 1921, and totals, 1915-1921.*

[Leading producing States.]

State and year.	Thousands of acres.		Average yield in bushels per acre.		Production (thousands of bushels).		Average farm price, cents per bushel Nov. 15.		Farm value (thousands of dollars).	
	1920	1921	1920	1921	1920	1921	1920	1921	1920	1921
Iowa.....	29	26	23.0	30.0	667	780	115.0	70.0	767	546
Missouri.....	12	12	30.0	23.0	360	276	160.0	80.0	576	221
Nebraska.....	17	15	21.0	22.0	357	330	100.0	40.0	357	132
Kansas.....	1,194	833	22.3	21.4	26,626	18,361	69.0	34.0	18,372	6,243
Texas.....	1,906	1,950	32.0	29.0	60,992	56,550	121.0	41.0	73,800	23,136
Oklahoma.....	1,350	1,240	26.0	21.0	35,100	26,040	60.0	30.0	21,060	7,812
Colorado.....	282	237	17.0	16.5	4,794	3,910	84.0	52.0	4,027	2,033
New Mexico.....	156	134	24.6	24.8	3,835	3,323	99.0	40.0	3,800	1,329
Arizona.....	24	40	26.0	30.0	624	1,200	99.0	60.0	618	720
California.....	150	140	27.0	31.0	4,050	4,340	105.0	70.0	4,252	3,038
Total.....	5,120	4,652	26.8	24.7	137,408	115,110	92.9	39.3	127,829	45,260
1919.....	5,060		25.8		130,734		127.4		166,510	
1918.....	6,036		12.1		73,241		150.0		109,881	
1917.....	5,153		11.9		61,409		161.9		99,433	
1916.....	3,944		13.7		53,868		105.9		57,027	
1915.....	4,153		27.6		114,460		44.7		51,177	

¹ Kafirs, milo maize, feterita.TABLE 240.—*Grain sorghums: Forecasts of production, monthly, with preliminary and final estimates.*

[000 omitted.]

Year	July.	August.	September.	October.	November production estimate.	Final estimate.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1916.....		89,474	74,662	78,135	61,024	53,858
1917.....	94,516	83,198	102,933	98,609	73,380	61,409
1918.....	110,005	95,441	74,211	72,650	61,182	73,241
1919.....	123,504	130,153	129,509	127,053	123,343	130,734
1920.....	122,750	125,924	133,964	139,503	148,747	¹ 137,408
1921.....	124,733	129,602	126,967	127,930	125,724	¹ 115,110

¹ Preliminary.TABLE 241.—*Grain sorghums: Farm price, cents per bushel, on 15th of month, 1916-1921.*

Year.	Jan. 15.	Feb. 15.	Mar. 15.	Apr. 15.	May 15.	June 15.	July 15.	Aug. 15.	Sept. 15.	Oct. 15.	Nov. 15.	Dec. 15.
1916.....				53.6	58.2	60.0	62.8	72.4	83.8	80.8	102.4	101.5
1917.....	119.1	129.0	147.0	152.0	188.0	206.3	214.0	243.3	187.7	174.1	160.6	166.7
1918.....	170.8	185.7	193.5	204.0	211.0	179.6	165.6	177.2	181.0	175.9	150.5	154.8
1919.....	153.7	156.9	150.9	162.1	173.6	174.1	175.6	176.9	153.7	139.7	133.6	144.3
1920.....	137.3	138.7	129.8	145.4	154.5	153.9	135.2	150.0	124.8	95.5	91.5	81.7
1921.....	65.6	57.8	67.3	53.8	51.5	62.0	51.0	58.0	54.9	48.3	35.8	33.8

Statistics of Grain Sorghums.

645

GRAIN SORGHUMS—Continued.

TABLE 242.—Grain sorghums: Monthly and yearly average price per 100 pounds, No. 2 white, kafir, Kansas City, 1910-11 to 1921-22.¹

Crop year	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Average.
1910-11	\$1.12	\$0.96	\$0.96	\$0.93	\$0.94	\$0.94	\$1.06	\$1.24	\$1.42	\$1.34	\$1.27	\$1.21	\$1.12
1911-12	1.06	.90	1.19	(²)	1.29	1.43	1.44	1.25	1.63	1.68	1.36	1.13	1.31
1912-13	.98	.86	.85	.83	.81	.82	.88	1.11	1.09	1.41	1.53	1.51	1.06
1913-14	1.57	1.63	1.72	1.72	1.76	(²)	2.00	(²)	(²)	(²)	(²)	(²)	1.74
1914-15	1.04	1.14	1.33	1.38	1.28	1.18	1.14	1.20	1.16	1.09	1.04	1.06	1.17
1915-16	.91	.99	.99	.96	.93	1.06	1.05	1.11	1.22	1.58	1.71	1.84	1.19
1916-17	2.34	2.11	2.43	2.48	2.66	3.17	3.79	3.36	4.00	4.48	4.34	3.69	3.24
1917-18	3.40	3.25	3.33	3.69	3.84	3.37	2.93	2.65	3.03	3.40	3.40	3.27	3.28
1918-19	2.96	2.61	2.69	2.70	2.56	2.67	2.97	3.12	3.51	3.61	2.41	2.34	2.86
1919-20	2.67	2.93	2.49	2.17	2.31	2.38	2.65	2.52	2.36	2.43	2.24	1.81	2.41
1920-21	1.39	1.17	.98	.91	.85	.80	1.03	1.12	1.21	1.13	1.13	1.02	1.06
1921-22	.85	.90											
11-year average..	1.77	1.69	1.72	1.78	1.75	1.78	1.90	1.90	2.06	2.22	2.04	1.89	1.87

¹ Compiled from Kansas City Price Current and Grain Market Review.

² No quotations.

PEANUTS.

TABLE 243.—Peanuts: Acreage, production, and value, by States, 1920 and 1921.

State and year.	Acreage.		Average yield in pounds per acre.		Production (thousands of pounds).		Average farm price, cents per pound Nov. 15		Farm value (thousands of dollars).	
	1920	1921	1920	1921	1920	1921	1920	1921	1920	1921
Virginia.....	133	149	830	732	110,390	109,068	5.5	5.8	6,071	6,326
North Carolina.....	126	141	1,011	919	127,386	129,579	5.6	5.6	7,134	7,256
South Carolina.....	31	38	950	875	29,450	33,250	8.0	4.0	2,356	1,330
Georgia.....	224	202	718	660	160,832	133,320	5.0	2.5	8,042	3,333
Florida.....	90	80	625	675	56,250	54,000	6.0	3.2	3,375	1,728
Tennessee.....	6	9	851	943	5,106	8,487	7.0	5.0	357	424
Alabama.....	334	330	550	550	183,700	181,500	3.5	2.8	6,430	5,082
Mississippi.....	17	19	600	650	10,200	12,350	7.0	6.0	714	741
Louisiana.....	18	18	600	487	10,800	8,766	5.5	6.0	594	526
Texas.....	174	195	720	635	125,280	123,825	6.0	3.4	7,517	4,210
Oklahoma.....	12	15	840	720	10,080	10,800	7.0	7.0	706	756
Arkansas.....	16	16	750	720	12,000	11,520	8.0	5.0	960	576
Total.....	1,181	1,212	712.5	673.7	841,474	816,465	5.3	4.0	44,256	32,288
1919.....	1,132,400		691.9		783,273		9.3		73,094	
1918.....	1,865,000		881.1		1,643,023		4.5		41,243	
1917.....	1,842,000		777.7		1,432,581		6.9		98,512	
1916.....	1,043,000		664.9		1,240,102		6.5		80,271	

TABLE 244.—Peanuts: Farm price, cents per pound on 15th of each month, 1910-1921.

Year.	Jan. 15.	Feb. 15.	Mar. 15.	Apr. 15.	May 15.	June 15.	July 15.	Aug. 15.	Sept. 15.	Oct. 15.	Nov. 15.	Dec. 15.
1910.....	4.9	5.4	5.0	5.4	5.2	5.4	5.2	4.5	4.5	4.6	4.7	4.5
1911.....	4.4	5.0	4.8	4.9	4.8	5.2	5.0	5.3	5.1	4.6	4.4	4.4
1912.....	4.3	4.7	5.0	4.9	4.9	5.2	4.9	5.0	4.8	4.7	4.7	4.6
1913.....	4.6	4.5	4.7	4.8	4.7	5.0	5.1	4.9	4.9	4.8	4.4	4.8
1914.....	4.7	4.7	4.7	4.9	5.1	5.1	5.2	4.9	5.0	4.5	4.4	4.3
1915.....	4.5	4.4	4.2	4.5	4.8	4.8	4.7	4.5	4.4	4.3	4.2	4.2
1916.....	4.3	4.4	4.4	4.6	4.6	4.7	4.6	4.6	4.4	4.4	4.4	4.7
1917.....	4.9	5.3	5.5	6.2	7.2	7.7	7.6	7.2	6.6	6.1	7.1	7.1
1918.....	7.0	7.2	7.4	8.3	8.2	7.9	7.8	7.9	8.3	6.9	6.6	6.1
1919.....	6.0	6.9	7.0	6.9	7.2	7.7	8.2	8.1	8.3	8.1	9.1	9.1
1920.....	9.9	10.5	11.2	10.9	11.2	11.2	11.0	8.5	8.0	5.8	5.3	4.7
1921.....	4.4	4.1	4.0	3.5	3.4	3.8	3.8	3.9	4.0	4.0	3.7	3.5

PEANUTS—Continued.

TABLE 245—*Peanuts, unshelled, international trade, calendar years 1911-1920.*

Includes shelled and unshelled, assuming the peanuts to be unshelled unless otherwise stated. When shelled nuts were reported they have been reduced to terms of unshelled at the ratio of 3 pounds unshelled to 2 pounds shelled.

[In thousands of pounds.]

Year.	Algeria.		Anglo-Egyptian Sudan.		Argentina.		Belgium.		Brazil, exports.	British India, exports.
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.		
1911.....	7,352	188	.....	2,476	9,046	.....	79,027	53,088	363	450,275
1912.....	6,588	209	.....	1,820	8,967	.....	57,817	33,698	383	488,722
1913.....	7,124	258	.....	1,586	7,987	.....	.....	.....	77	571,349
1914.....	6,759	312	5	459	4,687	48	.....	.....	93	586,545
1915.....	.....	.....	40	1,060	490	16	.....	.....	151	290,299
1916.....	.....	173	1	2,281	493	71	.....	.....	479	388,304
1917.....	1,204	.....	.....	6,473	1,459	36	.....	.....	2,630	290,173
1918.....	32	.....	.....	5,836	1,066	185	.....	.....	2,002	111,444
1919.....	42	.....	.....	7,476	285	2,520	.....	.....	1,975	129,342
1920.....	87	.....	.....	6,270	.....	.....	.....	.....	.....	271,358

Year.	Canada, imports.	China.		Denmark, imports.	Dutch East Indies.		Egypt.		Formosa.	
		Imports.	Exports.		Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
1911.....	16,072	19,949	143,186	4,620	375	70,457	4,548	1,933	.....	3
1912.....	7,212	34,128	114,234	2,620	1,004	58,987	4,191	1,750	.....	114
1913.....	8,622	44,568	157,997	8,459	457	51,401	5,253	1,228	.....	91
1914.....	8,872	26,885	195,369	9,938	456	47,302	3,615	652	.....	27
1915.....	16,952	27,086	87,509	21,076	655	34,262	581	359	.....	284
1916.....	10,160	23,679	113,896	21,972	1,070	28,042	584	2,167	552	96
1917.....	14,217	57,934	87,419	44	758	30,833	194	5,401	196	20
1918.....	16,659	93,528	103,238	18,207	444	23,367	7	2,387	87	167
1919.....	15,736	23,970	251,295	10,811	473	47,787	672	5,709	10	2,140
1920.....	20,134	26,159	246,343	.....	.....	.....	.....	.....	.....	.....

Year.	France.		French possessions in India, exports.	Gambia, exports.	Germany.		Guinea (French).		Guinea (Portuguese), exports.
	Imports.	Exports.			Imports.	Exports.	Imports.	Exports.	
1911.....	1,067,774	47,782	274,218	105,669	154,636	98	(2)	2,328	14,610
1912.....	1,301,230	48,813	295,131	141,467	154,034	.....	1	4,453	24,746
1913.....	1,349,974	44,727	350,755	148,599	216,239	.....	(2)	7,807	24,529
1914.....	1,487,917	33,946	.....	147,455	.....	.....	.....	7,331	.....
1915.....	1,026,510	29,621	.....	211,977	.....	.....	.....	2,790	.....
1916.....	1,046,574	10,500	.....	102,218	.....	.....	.....	1,705	.....
1917.....	644,428	1,435	.....	163,802	.....	.....	.....	1,764	.....
1918.....	194,613	805	.....	.....	.....	.....	.....	753	.....
1919.....	591,058	2,138	80,675	.....	21,939	.....	.....	2,922	.....
1920.....	1,062,099	5,707	.....	.....	.....	.....	.....	.....	.....

Year.	Hong Kong.		Italy, imports.	Japan.		Mozambique.		Netherlands.		Nigeria, exports.
	Imports.	Exports.		Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	
1911.....	10,315	.....	.....	104,899	28,135	4,601
1912.....	8,641	866	19,117	115,035	28,206	9,484
1913.....	13,069	1,331	12,697	148,652	42,248	43,205
1914.....	12,250	416	16,886	141,464	47,840	38,073
1915.....	1,902	12,303	142	23,009	102,776	15,646	19,958
1916.....	4,263	15,463	38	15,353	42,061	95	112,824
1917.....	3,748	18,770	124	29,329	21,669	(1)	112,748
1918.....	14,173	18,855	63	15,039	175	.....	.....
1919.....	140,951	106,789	.....	25,131	14,587	.....	.....	48,915	247	.....
1920.....	56,545	38,693	7,135	43,824	11,928	.....	.....	52,946	1,165	.....

¹ Includes some unshelled pecans.
² Less than 500 pounds.

³ Colony and Protectorate of Southern Nigeria.

PEANUTS—Continued.

TABLE 245.—Peanuts, unshelled, international trade, calendar years 1911-1920—Contd.

Year.	Perak, imports.	Philippine Islands, imports.	Siam, imports.	Senegal.		Singapore.		Spain, exports.	Tunis, imports.	Uganda, exports.
				Imports.	Exports.	Imports.	Exports.			
1911.....	1,442	1,857	1,928	(1)	363,556	16,474	9,622	7,540	.....	791
1912.....	1,772	2,400	2,196	.....	407,328	23,710	14,760	8,249	2,037	1,624
1913.....	1,662	2,583	1,824	337	506,928	.....	.....	11,827	882	1,319
1914.....	1,457	2,681	1,535	.....	618,449	.....	.....	5,613	1,145	860
1915.....	1,337	2,210	1,159	.....	668,142	.....	.....	7,863	1,107	18
1916.....	.....	2,445	.....	.....	273,684	.....	.....	7,160	883	190
1917.....	.....	2,447	.....	.....	387,192	.....	.....	6,840	262	408
1918.....	.....	2,200	.....	.....	279,958	69,996	51,193	2,431	512	108
1919.....	.....	2,284	.....	.....	629,355	.....	.....	10,377	597	.....
1920.....	901	3,241	.....	795	.....	15,320	6,517	5,058	1,138	.....

Year.	British South Africa.		United Kingdom, imports.	United States.		Upper Senegal and Niger, exports.	Other countries.		Total.	
	Imports.	Exports.		Imports.	Exports.		Imports.	Exports.	Imports.	Exports.
1911....	2,422	2	(2)	19,179	5,557	11,268	8,694	9,255	1,510,294	1,617,316
1912....	3,977	2	(2)	14,304	7,146	12,854	8,172	16,171	1,752,270	1,747,509
1913....	2,608	8	(2)	29,481	7,710	18,909	2,529	21,082	1,840,532	2,039,406
1914....	2,677	208	(2)	59,105	6,737	6,494	1,722	2,224	1,761,336	1,775,173
1915....	3,208	176	(2)	27,830	6,493	.....	1,664	282	1,226,725	1,412,616
1916....	4,184	10	(2)	34,251	18,375	.....	1,810	578	1,195,020	1,063,613
1917....	3,088	5	305,509	71,556	12,891	.....	1,697	598	1,129,230	1,169,977
1918....	3,508	56	304,120	103,591	12,319	.....	802	224	876,299	737,188
1919....	751	324	238,755	41,937	19,778	.....	540	818	1,072,998	1,246,676
1920....	1,896	58	275,126	174,919	9,366	.....	235	66	1,742,528	565,898

¹ Less than 500 pounds.

² Included in "Nuts and kernels for expressing oil, other sorts."

TRUCK CROPS.

TABLE 246.—Commercial acreage and production of truck crops in the United States, 1918-1921.

Crop.	Number of States producing.	Acreage.				Production.			
		1918	1919	1920	1921	1918	1919	1920	1921
		<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>				
Asparagus.....crts..	12	30,431	28,280	31,419	32,820	2,239,200	2,040,600	2,482,800	3,460,800
Beans (snap).....tons..	36	51,060	59,261	57,400	53,375	108,230	106,788	114,584	100,657
Cabbage.....tons..	25	92,230	87,497	115,838	94,035	682,138	587,838	1,029,662	606,275
Cantaloupes.....crts..	23	55,281	77,445	81,127	80,418	5,550,150	5,019,070	12,493,600	12,531,050
Cauliflower.....crts..	5	5,363	6,596	8,502	8,712	1,526,800	1,714,800	2,272,800	2,347,600
Celery.....crts..	8	12,885	14,012	16,260	14,903	2,525,580	2,906,283	3,707,100	3,307,140
Corn (sweet).....tons..	20	279,336	245,735	243,031	118,810	491,958	525,632	496,101	314,176
Cucumbers.....crts..	30	83,787	74,187	74,498	89,167	7,707,000	8,070,000	6,737,000	10,053,000
Lettuce.....crts..	13	17,041	18,766	31,903	30,231	5,031,316	5,318,468	9,023,752	9,479,558
Onions.....bu..	22	64,690	53,046	64,650	55,829	19,329,500	14,202,000	23,435,000	12,652,000
Peas.....tons..	27	148,116	155,046	158,101	137,588	150,147	130,306	154,204	110,520
Potatoes (early Irish).....bu..	17	266,122	202,618	246,650	240,708	24,667,000	19,464,500	27,025,500	24,945,000
Strawberries.....crts..	27	100,146	83,162	89,377	104,817	6,312,600	6,378,300	6,101,550	7,838,100
Tomatoes.....tons..	38	478,813	377,748	361,915	204,076	1,977,358	1,386,460	1,647,707	976,002
Watermelons.....no..	18	70,595	126,445	152,669	153,877	28,600,000	43,224,000	62,992,000	61,917,000

CABBAGE.

TABLE 247.—Commercial acreage, yield per acre, and production of cabbages in the United States, 1919-1921.

State.	Acreage harvested.			Yield per acre.			Production in cars— 25,000 pounds.		
	1919	1920	1921	1919	1920	1921	1919	1920	1921
Early:	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Cars.</i>	<i>Cars.</i>	<i>Cars.</i>
California.....	6,055	9,050	7,129	4.0	7.1	7.0	1,938	5,140	3,992
Florida.....	4,417	9,285	5,267	6.0	6.8	6.0	2,120	5,051	2,528
Louisiana.....	1,574	1,605	1,585	4.0	8.2	6.4	504	1,053	812
Texas.....	4,615	16,250	11,210	5.0	4.8	4.0	1,846	6,240	3,587
Late:									
Alabama.....	810	985	1,000	7.0	7.8	7.0	454	615	560
Colorado.....	4,003	4,390	3,995	10.0	15.1	11.7	3,202	5,303	3,739
Illinois.....	1,515	1,605	1,325	5.0	8.1	5.0	605	1,040	530
Indiana.....	1,232	1,240	1,090	6.3	9.8	6.0	621	972	523
Iowa.....	740	1,000	575	4.5	8.0	5.0	265	640	230
Kentucky.....	348	350	350	8.6	6.6	6.0	239	185	168
Maryland.....	2,072	2,155	2,055	8.0	5.8	4.8	1,326	1,014	789
Michigan.....	2,069	1,970	1,365	6.8	10.7	6.5	1,126	1,686	710
Minnesota.....	2,845	2,918	2,521	8.0	8.9	5.0	1,821	2,078	1,008
Mississippi.....	1,608	1,760	1,315	5.5	8.4	4.8	708	1,183	505
Missouri.....	691	725	700	8.0	8.0	8.1	444	464	454
New Jersey.....	3,895	4,522	4,220	7.5	8.1	6.5	2,337	2,930	2,194
New York.....	22,530	25,472	21,860	6.5	11.6	6.5	11,716	23,638	11,367
Ohio.....	2,354	2,885	2,108	7.0	9.9	6.0	1,318	2,285	1,041
Oregon.....	775	820	775	11.0	7.7	9.5	682	505	589
Pennsylvania.....	2,700	2,865	2,680	8.0	10.3	6.0	1,728	2,361	1,286
South Carolina.....	2,023	1,993	3,425	7.5	7.4	9.7	1,214	1,180	2,658
Tennessee.....	621	575	655	6.0	4.0	6.1	300	184	320
Virginia:									
Eastern Shore and									
Norfolk section....	2,587	2,840	3,195	6.5	5.8	8.8	1,345	1,318	2,249
Southwestern.....	2,206	2,575	2,500	7.5	12.2	6.0	1,324	2,513	1,200
Washington.....	1,051	1,026	920	10.0	10.2	8.0	841	837	589
Wisconsin.....	12,155	14,947	10,155	7.2	10.0	6.0	7,001	11,958	4,874

TABLE 248.—Cabbage: Farm price per 100 pounds on 15th of each month, 1910-1921.

Year.	Jan. 15.	Feb. 15.	Mar. 15.	Apr. 15.	May 15.	June 15.	July 15.	Aug. 15.	Sept. 15.	Oct. 15.	Nov. 15.	Dec. 15.
1910.....	\$1.87	\$2.05	\$2.14	\$2.29	\$2.77	\$2.19	\$2.27	\$1.89	\$1.94	\$1.58	\$1.36	\$1.49
1911.....	1.56	1.48	1.26	1.33	1.38	2.46	2.93	2.47	1.94	1.58	1.51	1.83
1912.....	1.89	2.24	2.88	3.17	2.98	2.67	2.29	1.88	1.25	1.08	1.04	1.15
1913.....	1.26	1.17	1.03	1.15	1.58	2.18	2.64	2.15	1.79	1.69	1.58	1.75
1914.....	1.87	2.07	2.03	2.24	2.05	2.61	2.66	1.74	1.50	1.31	1.14	1.26
1915.....	1.36	1.41	1.38	1.99	2.53	2.34	1.95	1.61	1.24	1.00	.97	1.07
1916.....	1.17	1.21	1.38	1.50	1.93	2.27	2.15	2.26	2.17	2.40	2.61	3.04
1917.....	3.95	5.65	6.77	7.61	7.53	5.10	3.23	2.19	1.76	1.79	2.66	2.28
1918.....	2.74	3.26	2.86	2.98	3.23	3.55	3.41	2.96	2.45	2.16	1.99	2.05
1919.....	2.19	2.33	2.71	3.79	4.97	4.68	4.23	3.73	3.08	2.88	2.74	3.49
1920.....	4.31	5.05	5.25	5.59	6.75	5.47	4.71	3.28	2.03	1.95	1.67	1.77
1921.....	1.91	1.86	1.71	2.03	3.10	4.04	3.95	3.16	2.61	2.39	2.42	2.77

CABBAGE—Continued.

TABLE 249.—Cabbage (Danish): Monthly range and average jobbing prices per 100 pounds at 10 markets, 1921.

Market.	January average.	February.		March.		October.		November.		December average.
		Range.	Average.	Range.	Average.	Range.	Average.	Range.	Average.	
New York.....	\$1.00	\$0.68-\$0.83	\$0.73	\$.68-\$0.95	\$0.81	\$1.82-\$2.05	\$1.98	\$1.78-\$2.40	\$2.08	\$2.49
Chicago.....	.92	.47-.83	.71	.30-.78	.64	1.75-2.25	2.02	2.00-3.25	2.47	2.39
Philadelphia.....	.93	.55-.80	.69	.55-.83	.69	1.50-2.00	1.87	1.50-2.38	1.91	2.42
Pittsburgh.....	1.04	.70-.95	.80	.55-.78	.66	2.15-2.75	2.48	2.25-2.88	2.57	2.67
St. Louis.....	1.12	.75-1.25	.99	.63-1.25	.96	1.69-2.75	2.15	1.81-2.50	2.30	2.65
Cincinnati.....	1.03	.95-1.18	1.05	.50-1.13	.82	1.50-2.62	2.14	1.50-2.50	2.10	2.73
St. Paul.....										
Minneapolis.....										
Kansas City.....	1.39	.75-1.50	1.05	.50-1.00	.78	1.50-2.50	2.09	1.75-3.25	2.61	3.15
Washington ¹	1.93	1.25-1.50	1.47	1.00-1.50	1.25			2.00-3.00	2.53	3.03

¹ Sales direct to retailers.

TABLE 250.—Cabbage: Carlot shipments, by States of origin, for 1917-1921.

State.	1917	1918	1919	1920	1921	State.	1917	1918	1919	1920	1921
Maine.....		50	(¹)	(¹)	54	Iowa.....	453	389	205	374	144
New York, Long Island.....	118	111	(²)	(²)	(²)	Missouri.....	(¹)	50	138	(¹)	99
New York, other.....	4,999	8,357	7,300	7,042	9,603	Kentucky.....	96	121	185	128	98
New Jersey.....	(¹)	60	(¹)	111	(¹)	Tennessee.....	51	117	175	141	176
Pennsylvania.....	94	160	383	239	291	Alabama.....	87	860	421	265	940
Maryland.....	171	63	254	260	325	Mississippi.....	281	1,128	566	884	821
Virginia.....	1,891	1,927	1,508	1,532	3,596	Louisiana.....	150	258	188	233	313
North Carolina.....	(¹)	69	(¹)	66	230	Texas.....	931	304	1,437	4,828	1,757
South Carolina.....	663	1,867	1,172	1,037	3,285	Colorado.....	2,485	1,960	2,323	1,656	2,571
Florida.....	1,413	3,782	1,537	4,745	1,518	Oregon.....	(¹)	51	(¹)	(¹)	(¹)
Ohio.....	546	578	283	342	335	Washington.....	74	(¹)	(¹)	103	173
Indiana.....	250	161	(¹)	(¹)	(¹)	California.....	1,412	1,078	1,395	1,247	845
Illinois.....	65	267	161	146	102	All other.....	203	119	497	243	317
Michigan.....	524	430	385	335	486	Total.....	20,354	28,661	24,982	31,020	32,039
Wisconsin.....	2,815	3,334	3,508	4,179	3,348						
Minnesota.....	582	1,010	961	834	612						

¹ Included in all other.

² Included in New York other.

ONIONS.

TABLE 251.—Commercial acreage, yield per acre, and production of onions in the United States, 1919-1921.

State.	Acreage harvested.			Yield per acre.			Production (cars of 500 bushels each).		
	1919	1920	1921	1919	1920	1921	1919	1920	1921
Early crop:	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Cars.</i>	<i>Cars.</i>	<i>Cars.</i>
California.....	885	3,300	2,000	312	298	245	540	1,907	980
Louisiana.....	972	1,080	1,010	180	158	208	311	341	416
Texas.....	6,590	12,446	10,503	267	256	207	3,519	6,372	4,348
Late Crop:									
California.....	6,570	8,400	7,149	325	325	225	4,271	5,460	3,217
Colorado.....	832	755	765	250	344	250	416	519	382
Idaho.....	61	275	145	500	558	570	61	307	165
Illinois.....	909	954	1,052	200	430	210	364	820	442
Indiana.....	4,779	4,582	3,931	200	498	237	1,912	4,564	1,863
Iowa.....	1,296	1,345	1,250	300	454	202	778	1,221	505
Kentucky.....	1,000	900	1,000	300	368	175	600	662	350
Maryland.....	300	300	300	250	300	250	150	180	150
Massachusetts.....	4,405	4,850	4,500	340	497	260	2,995	4,821	2,340
Michigan.....	1,568	1,393	1,275	175	498	225	549	1,387	574
Minnesota.....	1,458	1,415	1,280	275	310	122	791	877	312
New Jersey.....	2,376	2,610	2,380	250	241	239	1,188	1,258	1,158
New York.....	8,563	8,537	7,255	265	410	268	4,538	7,000	3,889
Ohio.....	6,092	6,511	5,593	250	410	191	3,046	5,339	2,137
Oregon.....	760	882	609	300	372	296	456	656	361
Pennsylvania.....	331	350	289	300	425	200	199	298	116
Texas.....	423	750	800	250	250	275	124	375	440
Utah.....	124	120	124	500	480	250	124	115	62
Virginia.....	896	950	820	250	516	280	433	600	459
Washington.....	791	770	789	400	412	271	633	634	428
Wisconsin.....	1,135	1,175	1,010	140	407	114	318	1,097	270

¹ Does not include acreage grown under contract with seedsmen.

TABLE 252.—Onions: Farm price, cents per bushel on 15th of each month, 1910-1921.

Year.	Jan. 15.	Feb. 15.	Mar. 15.	Apr. 15.	May 15.	June 15.	July 15.	Aug. 15.	Sept. 15.	Oct. 15.	Nov. 15.	Dec. 15.
1910.....	94.4	100.1	92.5	103.4	102.8	105.8	104.5	99.8	99.4	93.2	94.6	98.8
1911.....	101.0	104.0	105.0	119.0	129.0	134.0	122.0	116.0	104.0	102.0	103.0	113.0
1912.....	117.0	140.0	167.0	175.0	177.0	155.0	114.0	100.0	89.0	85.0	84.0	84.0
1913.....	81.6	77.5	77.0	79.0	87.2	95.6	101.7	105.1	103.9	110.2	114.9	114.9
1914.....	121.0	140.7	155.2	159.2	152.6	140.8	170.4	137.9	101.3	88.3	84.4	92.3
1915.....	88.9	97.6	95.3	104.4	102.9	102.9	93.0	86.3	82.8	94.8	94.8	99.6
1916.....	113.2	126.3	130.3	123.5	123.3	133.8	147.3	133.5	122.9	131.4	153.8	175.7
1917.....	208.4	357.9	476.2	495.6	398.0	308.0	201.0	154.7	142.9	157.5	176.6	177.0
1918.....	178.9	183.2	147.0	134.1	134.7	138.7	162.6	164.7	163.3	143.2	143.1	131.7
1919.....	133.5	154.7	199.8	202.1	229.9	234.1	232.0	225.8	195.4	196.4	212.5	245.8
1920.....	280.8	307.3	325.6	344.2	337.6	264.2	204.8	176.4	172.9	158.9	143.8	132.0
1921.....	135.2	131.2	114.2	98.4	106.7	138.2	147.7	159.1	168.5	186.6	219.9	245.2

TABLE 253.—Onions (various common varieties): Monthly average jobbing prices per 100 pounds at 10 markets, 1921.

Market.	Jan.	Feb.	Mar.	April	Aug. ¹	Sept.	Oct.	Nov.	Dec.
New York.....	\$1.31	\$0.98	\$0.80	\$1.13	\$2.80	\$3.43	\$5.06	\$5.63	\$5.45
Chicago.....	1.16	.98	.93	.80	2.58	3.61	4.47	5.11	5.62
Philadelphia.....	1.27	.98	.87	1.11	3.02	3.80	4.80	5.34	5.52
Pittsburgh.....	1.26	.89	.90	1.11	3.05	3.82	4.86	5.41	5.57
St. Louis.....	1.17	.91	.70	.78	2.95	3.70	4.88	5.45	5.68
Cincinnati.....	1.25	1.13	.85	.....	2.92	3.74	5.19	5.59	5.45
St. Paul.....	.....	.....	.....	.....	2.85	3.49	4.92	4.88	4.44
Minneapolis.....	.....	.....	.....	.....	2.70	3.34	4.76	4.81	4.60
Kansas City.....	1.85	1.13	.66	.....	2.97	3.60	4.38	5.40	5.42
Washington ²	1.88	1.53	1.35	2.03	3.64	4.27	4.93	5.93	5.78

Quotations began August 22.

² Sales direct to retailers.

ONIONS—Continued.

TABLE 254.—Onions: *Carlot shipments, by States of origin, for 1917-1921.*

State.	1917	1918	1919	1920	1921	State	1917	1918	1919	1920	1921
Massachusetts.....	2,295	2,892	2,917	3,373	2,835	Iowa.....	676	971	592	821	466
New York.....	1,537	2,021	2,588	2,721	3,561	Kentucky.....	185	213	339	299	365
New Jersey.....	561	597	638	629	436	Louisiana.....	171	450	101	106	79
Pennsylvania.....	(1)	77	118	80	161	Texas.....	5,896	3,575	2,876	5,086	4,209
Maryland.....	(1)	(1)	(1)	89	130	Colorado.....	185	198	198	177	392
Virginia.....	153	99	131	181	140	Idaho.....	(1)	(1)	(1)	28	46
Florida.....		(1)		27		Washington.....	308	367	611	766	585
Ohio.....	1,661	1,805	1,890	2,009	2,128	Oregon.....	207	138	310	85	270
Indiana.....	881	1,829	1,158	2,616	2,428	California.....	3,257	4,008	5,219	4,526	3,618
Illinois.....	161	305	195	300	279	All other.....	173	88	128	33	108
Michigan.....	121	590	308	576	591	Total.....	19,152	22,027	20,871	25,950	23,359
Wisconsin.....	150	302	155	257	254						
Minnesota.....	545	832	489	232	222						

1 Included in all other.

TOMATOES.

TABLE 255.—Commercial acreage, yield per acre, and production of tomatoes for canning and table stock, 1918-1921.

State.	Acreage.			Yield per acre.			Production.		
	1919	1920	1921	1919	1920	1921	1919	1920	1921
	<i>Acre.</i>	<i>Acre.</i>	<i>Acre.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Alabama.....	883	890	798	3.0	2.2	3.1	2,619	1,958	2,713
Arkansas.....	4,978	5,830	2,265	2.8	3.3	3.3	13,938	19,239	7,474
California.....	46,681	39,153	14,115	7.0	5.5	5.4	326,788	215,342	76,393
Colorado.....	2,809	3,435	1,267	9.1	6.3	6.0	25,562	21,640	7,602
Connecticut.....	988	1,010	1,021	5.0	6.7	3.0	1,910	6,767	3,063
Delaware.....	22,807	19,677	2,503	1.6	4.5	4.9	36,491	88,546	12,265
Florida.....	20,610	22,715	18,030	2.8	2.3	5.7	57,792	52,314	102,771
Georgia.....	468	410	425	3.0	2.5	3.5	1,401	1,100	1,488
Idaho.....	61	190	283	6.0	2.5	7.0	366	475	1,981
Illinois.....	8,520	9,310	7,064	3.6	6.4	3.5	30,672	59,584	21,724
Indiana.....	40,611	44,876	25,753	4.2	4.5	5.0	170,705	201,942	128,765
Iowa.....	3,077	2,690	2,591	4.8	5.6	3.3	14,770	15,064	8,550
Kansas.....	1,211	1,245	1,180	4.0	5.3	3.0	4,904	6,598	3,540
Kentucky.....	4,830	6,907	4,870	5.5	4.1	3.3	26,565	28,319	16,071
Louisiana.....	391	255	205	3.0	6.0	3.0	1,173	1,530	615
Maryland.....	60,071	49,511	17,336	1.5	3.5	4.2	90,106	173,288	72,811
Massachusetts.....	1,096	1,700	1,725	5.0	3.9	6.0	8,480	6,630	10,350
Michigan.....	5,130	4,200	3,440	4.1	5.5	5.6	21,033	23,100	19,264
Minnesota.....	556	575	510	5.0	3.5	3.0	2,780	2,012	1,620
Mississippi.....	5,777	6,410	7,350	4.0	2.6	2.9	23,108	16,744	21,315
Missouri.....	18,274	18,595	8,149	2.0	3.4	3.1	36,548	63,223	25,262
Nebraska.....	349	445	294	1.5	4.0	4.0	524	1,780	1,176
New Jersey.....	39,857	36,560	31,717	2.6	4.9	5.1	103,628	179,144	161,757
New Mexico.....	700	100	70	3.7	1.8	4.0	2,590	180	280
New York.....	14,229	16,347	9,254	6.5	8.5	8.2	92,488	138,960	75,883
North Carolina.....	487	410	380	6.0	3.1	3.6	2,922	1,271	1,368
Ohio.....	13,232	13,745	11,629	5.7	6.6	5.8	75,422	90,717	67,448
Oklahoma.....	830	880	680	4.0	5.0	3.0	3,320	4,400	2,040
Oregon.....	752	535	515	3.2	6.0	12.0	2,406	3,210	6,180
Pennsylvania.....	6,579	6,110	5,326	3.6	6.9	4.8	23,684	42,159	25,565
South Carolina.....	419	442	562	3.0	2.5	3.1	1,257	1,105	1,742
Tennessee.....	9,349	10,327	5,914	3.3	3.2	3.0	30,852	33,046	17,742
Texas.....	4,519	8,385	10,436	3.0	2.5	3.0	13,557	20,962	31,308
Utah.....	4,747	3,925	1,178	8.5	9.6	12.3	40,350	37,680	14,489
Virginia.....	27,462	20,115	2,213	2.7	3.5	3.0	74,147	70,402	6,639
Washington.....	695	650	658	7.0	7.2	10.0	4,865	4,680	6,580
West Virginia.....	1,880	1,990	1,068	4.1	3.9	3.6	7,733	7,761	3,204
Wisconsin.....	1,131	1,275	1,242	5.2	3.8	3.2	5,881	4,815	3,974
Total.....	377,748	361,915	201,076	3.7	4.6	4.8	1,386,460	1,617,707	970,062

TOMATOES—Continued.

TABLE 256.—*Tomatoes: Monthly average jobbing prices per 4-basket and 6-basket carriers at 10 markets, 1921.*

Market.	4-basket carriers.		6-basket carriers, June.	Market.	4-basket carriers.		6-basket carriers, June.
	June.	July.			June.	July.	
New York.....	\$1.70	\$1.20	\$2.96	St. Louis.....	\$1.61	\$0.71	...
Chicago.....	1.59	1.05	...	Cincinnati.....	1.52	1.06	2.63
Philadelphia.....	1.11	...	2.58	Kansas City.....	1.68	.67	...
Pittsburgh.....	1.58	1.22	3.10	Washington.....	...	1.32	3.03

1 Sales direct to retailers.

TABLE 257.—*Tomatoes: Carlot shipments, by States of origin, for 1917-1921.*

State.	1917	1918	1919	1920	1921	State.	1917	1918	1919	1920	1921
New York.....	143	381	457	845	1,098	Missouri.....	97	89	117	(1)	(1)
New Jersey.....	2,239	2,016	1,012	2,356	2,132	Kentucky.....	93	(1)	(1)	549	337
Pennsylvania.....	(1)	53	390	41	24	Tennessee.....	917	654	368	805	257
Delaware.....	877	1,130	502	153	189	Mississippi.....	1,062	1,379	1,335	1,363	1,961
Maryland.....	237	200	206	138	128	Texas.....	1,278	1,123	1,207	1,286	1,714
Virginia.....	173	97	...	(1)	81	Arkansas.....	(1)	...	(4)	21	22
South Carolina.....	(1)	(1)	26	(1)	58	Utah.....	(1)	633	318	750	600
Florida.....	4,695	3,700	4,487	3,740	5,774	Washington.....	(1)	(1)	(1)	63	11
Ohio.....	628	799	489	330	351	California.....	519	1,510	2,186	1,968	1,851
Indiana.....	521	1,150	918	1,148	528	All other.....	115	87	91	97	73
Illinois.....	157	393	231	310	155	Total.....	14,115	15,471	14,503	15,509	17,469
Michigan.....	(1)	85	(1)	28	22						
Iowa.....	(1)	(1)	29	23	(1)						

1 Included in all other.

TABLE 258.—*Tomatoes: Farm price, cents per bushel, 15th of month, 1912-1921.*

Date.	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921
July 15.....	127.0	161.4	167.4	141.4	161.5	194.3	219.1	236.3	324.4	319.6
Aug. 15.....	75.6	95.8	92.5	66.4	88.4	121.3	123.1	177.0	168.4	142.4
Sept. 15.....	58.7	68.0	63.0	56.9	75.6	109.5	103.0	137.2	191.4	163.6
Oct. 15.....	62.3	73.0	60.3	67.9	82.1	117.6	108.6	117.7	98.9	113.9

TURNIPS.

TABLE 259.—*Turnips: Farm price, cents per bushel, 15th of month, 1912-1921.*

Date.	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19	1919-20	1920-21	1921-22
Nov. 15.....	44.6	56.1	47.4	45.9	68.4	76.4	79.6	98.9	91.1	88.5
Dec. 15.....	49.1	55.1	48.4	45.1	73.3	81.1	79.6	101.8	85.9	81.5
Jan. 15.....	49.6	56.8	42.9	48.6	78.6	88.4	82.1	112.4	89.7	87.5
Feb. 15.....	51.2	60.0	51.1	49.6	91.1	89.9	84.7	124.1	88.7	90.3

CELERY.

TABLE 260.—*Celery: Carlot shipments, by States of origin, for 1919-1921.*

State.	1919	1920	1921	State.	1919	1920	1921
New York.....	1,523	2,675	3,084	Colorado.....	213	283	201
New Jersey.....	177	105	216	California.....	1,796	2,384	3,387
Pennsylvania.....	(1)	176	236	All other.....	92	71	151
Florida.....	2,051	3,010	4,172	Total.....	6,440	9,308	12,423
Michigan.....	598	604	1,011				

1 Included in all other.

LETTUCE.

TABLE 261.—*Lettuce: Carlot shipments, by States of origin, for 1919-1921.*

State.	1919	1920	1921	State.	1919	1920	1921
New York.....	1,761	2,138	3,441	Louisiana.....	36	(1)	(1)
New Jersey.....	245	515	478	Texas.....	99	176	114
Pennsylvania.....	(1)	17	32	Colorado.....	(1)	129	244
Virginia.....	31	26	135	Arizona.....	41	165	165
North Carolina.....	319	265	448	Idaho.....	(1)	26	182
South Carolina.....	395	356	583	Washington.....	(1)	345	632
Florida.....	2,134	3,120	2,286	California.....	2,731	6,350	9,735
Ohio.....	52	(1)	(1)	All other.....	75	36	69
Michigan.....	63	110	97	Total.....	8,618	13,821	18,685
Minnesota.....	45	51	13				

¹Included in all other.

STRAWBERRIES.

TABLE 262.—*Strawberries: Monthly average jobbing prices per quart at 10 markets, 1921.*

Market.	March. ¹	April.	May.	Market.	March. ¹	April.	May.
New York.....	\$0.47	\$0.11	\$0.27	Cincinnati.....	\$0.33	\$0.27	\$0.23
Chicago.....	.31	.37	.24	St. Paul.....	.38	.44	.28
Philadelphia.....	.33	.34	.23	Minneapolis.....	.37	.41	.31
Pittsburgh.....	.31	.34	.26	Kansas City.....	.33	.36	.23
St. Louis.....	.31	.33	.23	Washington.....	.50	.35	.22

¹Quotations began Mar. 17.²Sales direct to retailers.TABLE 263.—*Strawberries: Carlot shipments, by States of origin, for 1917-1921.*

State.	1917	1918	1919	1920	1921	State.	1917	1918	1919	1920	1921
Massachusetts.....	55	75	84	87	102	Kentucky.....	676	410	132	234	381
New York.....	210	242	112	362	244	Tennessee.....	1,781	1,241	1,099	1,182	1,693
New Jersey.....	829	445	326	559	425	Alabama.....	196	277	229	147	280
Delaware.....	2,340	822	450	640	854	Mississippi.....	91	79	102	(1)	(1)
Maryland.....	2,193	838	611	787	1,069	Louisiana.....	1,100	556	682	808	1,517
Virginia.....	1,352	342	208	349	697	Texas.....	121	(1)	(1)	(1)	(1)
North Carolina.....	696	585	484	440	479	Arkansas.....	1,096	651	1,034	806	1,094
Florida.....	193	79	(1)	153	108	Washington.....	53	(1)	(1)	(1)	140
Indiana.....	76	(1)	(1)	62	(1)	Oregon.....	106	73	93	120	146
Illinois.....	347	126	80	98	74	California.....	245	509	703	569	291
Michigan.....	475	272	391	439	455	All other.....	161	161	158	111	131
Wisconsin.....	(1)	(1)	(1)	68	52	Total.....	15,965	8,452	8,105	8,490	10,681
Iowa.....	(1)	55	66	(1)	(1)						
Missouri.....	673	620	1,081	318	466						

¹Included in all other.

WATERMELONS.

TABLE 264.—*Watermelons: Carlot shipments, by States of origin, for 1919-1921.*

State.	1919	1920	1921	State.	1919	1920	1921
Delaware.....	327	177	499	Mississippi.....	(1)	95	205
Maryland.....	515	458	763	Texas.....	3,007	4,845	4,298
Virginia.....	263	312	361	Oklahoma.....	870	466	568
North Carolina.....	811	799	1,539	Arkansas.....	298	314	577
South Carolina.....	2,673	4,735	4,427	Colorado.....	211	71	166
Georgia.....	8,084	11,103	16,148	Arizona.....	121	(1)	(1)
Florida.....	3,878	6,807	5,772	Washington.....	143	195	142
Indiana.....	681	6,817	742	California.....	3,900	3,270	3,771
Illinois.....	190	231	461	All other.....	93	171	276
Iowa.....	321	348	807	Total.....	30,890	30,256	46,483
Missouri.....	3,516	3,012	3,223				
Alabama.....	708	1,160	1,486				

¹Included in all other.

CANTALOUPE.

TABLE 265.—Cantaloupes: Carlot shipments, by States of origin, for 1917-1921.

State.	1917	1918	1919	1920	1921	State	1917	1918	1919	1920	1921
New Jersey.....	90	50	62	117	241	Texas.....	(1)	(1)	123	(1)	162
Delaware.....	702	429	590	581	913	Arkansas.....	797	639	1,106	936	1,501
Maryland.....	855	490	835	771	1,209	Colorado.....	1,808	1,818	3,132	2,451	3,216
North Carolina.....	1,106	418	523	359	821	New Mexico.....	227	256	378	937	421
South Carolina.....	157	31	100	110	300	Arizona.....	1,215	1,169	1,839	1,161	1,474
Georgia.....	789	551	314	389	640	Nevada.....	139	36	36	48	74
Florida.....	(1)	26	82	(1)	32	Washington.....	115	110	100	329	209
Indiana.....	664	443	462	635	611	California.....	8,258	6,818	12,010	13,100	13,177
Illinois.....	119	103	85	85	97	All other.....	101	36	29	75	66
Michigan.....	42	37	204	209	176	Total.....	17,430	13,619	22,039	22,377	25,574
Iowa.....	68	43	26	40	41						
Missouri.....	(1)	(1)	(1)	38	107						
Tennessee.....	46	26	(1)	(1)	23						

¹ Included in all other.

GRAPES.

TABLE 266.—Grapes: Carlot shipments, by States of origin, for 1919-1921.

State.	1919	1920	1921	State.	1919	1920	1921
New York.....	3,751	6,079	2,451	Missouri.....	36	26	(1)
Pennsylvania.....	881	1,245	390	Washington.....	37	(1)	67
Delaware.....	(1)	44	(1)	California.....	21,005	26,971	32,565
Ohio.....	87	50	68	All other.....	61	71	42
Michigan.....	3,763	4,607	1,237	Total.....	30,319	39,205	34,888
Iowa.....	108	106	68				

¹ Included in all other.

FRUITS AND VEGETABLES.

TABLE 267.—Fruits and vegetables: Yearly unloads of 8 commodities at 10 markets, in carlots, 1916-1921.

Crop and year.	New York.	Chi- cago.	Phil- adel- phia.	Pitts- burgh.	St. Louis.	Cin- cin- nati.	St. Paul.	Min- neap- olis.	Kan- sas City.	Wash- ing- ton.	Total.
Apples:											
1916.....	10,191	5,252	3,342	3,445	3,225	1,338	589	869	953	459	29,663
1917.....	17,996	4,335	2,343	2,498	2,117	636	284	586	988	333	122,110
1918.....	11,336	4,536	2,701	2,951	1,510	1,130	410	568	709	633	26,514
1919.....	10,601	6,069	2,884	2,216	1,379	1,150	227	348	674	387	26,215
1920.....	11,058	7,102	3,217	2,792	1,975	1,617	401	464	1,006	590	30,222
1921.....	11,984	6,631	3,416	2,808	1,856	1,810	351	422	1,002	369	30,652
6-year av- erage.....	¹ 10,528	5,655	2,980	2,785	2,015	1,330	377	543	880	462	² 27,561
Cabbage:											
1916.....	2,070	1,366	1,565	1,461	987	452	75	75	388	235	8,674
1917.....	2,027	1,141	1,325	896	1,001	425	46	81	375	186	7,503
1918.....	2,880	1,322	1,936	1,670	858	577	54	57	580	371	10,305
1919.....	2,301	1,837	1,662	1,172	746	557	53	49	421	287	9,085
1920.....	2,306	1,855	1,906	1,207	804	596	74	121	399	393	9,311
1921.....	3,080	1,780	1,962	1,105	1,049	669	68	75	400	386	10,524
6-year av- erage.....	³ 2,436	1,467	1,726	1,267	918	546	62	76	427	310	³ 9,231
Cantaloupes:											
1916.....	3,141	1,628	924	1,530	397	442	90	175	270	123	8,720
1917.....	3,365	793	815	1,140	285	418	85	142	360	99	7,592
1918.....	3,029	1,059	493	1,068	286	389	38	118	128	126	6,734
1919.....	3,867	1,936	1,449	1,702	305	597	92	171	448	230	10,397
1920.....	4,213	2,061	1,091	1,275	452	554	60	94	396	266	10,462
1921.....	4,781	2,186	1,258	1,322	539	640	115	106	452	242	11,701
6-year av- erage.....	3,733	1,610	938	1,340	377	507	80	144	342	181	9,253

¹ Reports incomplete.² An additional 152 cars received in L. C. L. receipts.³ Including incomplete reports of 1917.⁴ An additional 53 cars received in L. C. L. receipts.⁵ An additional 152 cars received in L. C. L. receipts.

FRUITS AND VEGETABLES—Continued.

TABLE 267.—Fruits and vegetables: Yearly unloads of 8 commodities at 10 markets, in carlots, 1916-1921—Continued.

Crop and year.	New York.	Chicago.	Philadelphia.	Pittsburgh.	St. Louis.	Cincinnati.	St. Paul.	Minneapolis.	Kansas City.	Washington.	Total.
Onions:											
1916.....	4,951	1,450	1,574	1,441	801	284	83	116	330	137	11,197
1917.....	¹ 4,666	1,146	1,605	1,178	753	286	50	149	497	108	¹ 10,349
1918.....	4,465	695	1,512	1,208	519	276	25	75	380	220	9,444
1919.....	4,801	1,403	1,308	976	438	226	61	83	281	171	9,844
1920.....	1,072	1,237	1,554	1,115	687	283	40	107	426	226	9,747
1921.....	² 4,429	1,545	1,482	922	559	314	71	91	345	196	9,954
6-year average.....	³ 4,564	1,246	1,526	1,140	631	278	55	108	364	177	³ 10,089
Peaches:											
1916.....	3,335	929	1,084	1,450	347	499	84	210	139	123	8,269
1917.....	3,620	1,067	827	1,167	348	495	69	193	292	120	8,195
1918.....	3,683	1,060	892	1,010	188	415	97	83	205	138	7,771
1919.....	3,935	1,357	911	1,221	334	631	128	112	285	158	9,105
1920.....	3,506	1,267	847	849	347	481	36	61	158	253	7,818
1921.....	⁴ 4,113	1,326	1,056	750	481	690	77	101	268	148	8,959
6-year average.....	3,714	1,168	942	1,078	311	520	82	127	221	158	8,353
Potatoes (white):											
1916.....	20,629	12,125	6,568	7,327	2,867	1,610	725	1,056	2,522	417	55,846
1917.....	⁵ 20,601	9,669	6,411	5,185	2,901	1,573	110	1,146	2,516	439	⁵ 50,904
1918.....	19,339	12,177	6,823	6,516	2,739	1,583	125	397	2,682	1,213	53,760
1919.....	18,378	12,178	7,638	7,326	2,753	2,017	150	498	2,521	1,000	54,502
1920.....	17,194	11,302	7,190	5,614	2,512	2,189	137	776	2,145	585	50,454
1921.....	⁶ 17,996	13,077	7,660	5,395	3,592	2,857	594	845	2,257	1,153	55,217
6-year average.....	⁷ 19,058	11,791	7,025	6,227	2,895	1,969	407	791	2,432	851	⁸ 53,417
Strawberries:											
1916.....	2,780	1,669	585	611	181	251	180	318	221	7	6,836
1917.....	2,771	910	679	435	89	287	82	199	173	10	5,635
1918.....	1,265	876	304	271	77	255	52	119	100	18	3,278
1919.....	898	1,246	263	166	45	232	58	101	50	56	3,089
1920.....	1,202	1,909	291	185	85	80	49	81	68	75	3,028
1921.....	⁶ 1,101	1,439	300	321	132	350	72	117	180	89	4,158
6-year average.....	1,660	1,185	400	337	102	241	82	161	132	35	4,337
Tomatoes:											
1916.....	2,917	1,425	1,049	1,364	318	439	61	125	300	131	8,162
1917.....	¹ 3,310	1,333	696	945	237	347	27	75	266	105	¹ 7,311
1918.....	3,229	1,008	698	1,016	64	191	39	64	185	115	6,609
1919.....	2,936	1,020	913	993	178	202	24	50	235	158	6,789
1920.....	3,153	1,199	826	765	220	218	15	49	214	180	6,839
1921.....	⁷ 2,872	1,588	1,105	919	327	287	31	58	262	193	7,615
6-year average.....	² 3,078	1,262	886	1,000	229	281	33	70	211	148	³ 7,231
Total:											
1916.....	50,074	25,844	16,691	18,671	9,153	5,315	1,887	2,974	5,123	1,635	137,367
1917.....	¹ 48,356	20,334	11,732	13,444	7,734	4,407	1,053	2,618	5,407	1,400	¹ 119,545
1918.....	49,158	23,033	15,389	15,710	6,301	4,771	840	1,481	4,898	2,831	121,415
1919.....	47,767	27,096	16,771	15,772	6,181	5,912	793	1,412	4,918	2,444	129,026
1920.....	46,931	26,432	16,922	13,892	7,142	6,018	1,112	1,739	4,812	2,878	127,881
1921.....	⁸ 50,326	29,635	18,039	13,552	8,535	7,533	1,382	1,905	5,166	2,737	138,810
6-year average.....	¹ 48,769	25,384	16,424	15,174	7,508	5,674	1,178	2,022	5,054	2,321	³ 129,577

¹ Reports incomplete.² An additional 506 cars received in L. C. L. receipts.³ Including incomplete reports of 1917.⁴ An additional 74 cars received in L. C. L. receipts.⁵ An additional 1,754 cars received in L. C. L. receipts.⁶ An additional 822 cars received in L. C. L. receipts.⁷ An additional 512 cars received in L. C. L. receipts.⁸ An additional 3,825 cars received in L. C. L. receipts.

FRUITS AND VEGETABLES—Continued.

TABLE 268.—Monthly and yearly carlot shipments of 14 commodities (fruits and vegetables) in the United States, 1917-1921.

Crop and year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Apples:													
1917.....	2,330	2,153	2,175	1,239	965	301	1,559	1,308	5,719	21,895	14,165	3,993	57,048
1918.....	2,362	3,232	2,882	1,647	347	229	1,119	2,359	8,070	26,680	13,533	6,330	68,810
1919.....	4,044	3,679	2,063	1,006	430	189	1,319	2,712	12,359	32,666	15,834	5,301	81,552
1920.....	4,393	4,419	4,378	2,229	1,276	262	1,835	3,861	11,013	37,284	23,087	8,871	103,062
1921.....	6,046	6,698	5,695	2,819	1,476	403	1,222	3,405	13,126	34,198	14,458	5,906	95,837
Cabbage:													
1917.....	1,256	463	503	457	1,034	2,121	753	1,015	2,505	6,078	2,501	1,038	20,354
1918.....	1,498	1,735	1,790	3,379	3,734	1,594	615	1,305	3,261	5,031	3,298	1,371	28,601
1919.....	2,182	2,017	1,977	1,831	2,469	1,438	557	1,152	2,465	5,137	2,111	1,346	24,982
1920.....	1,931	2,518	3,328	3,935	2,041	1,508	612	1,095	1,791	5,399	4,007	1,355	31,020
1921.....	2,852	2,293	2,929	4,101	3,430	1,727	159	1,393	2,791	5,411	2,609	2,044	32,069
Cantaloupes:													
1917.....						3,468	5,882	5,561	2,184	366	23	3	17,430
1918.....					51	4,343	3,949	3,922	1,330	10			13,619
1919.....					66	6,902	7,141	4,755	2,834	338			22,039
1920.....					475	6,781	5,318	6,867	2,784	152			22,377
1921.....					638	7,974	8,636	5,990	2,153	171	12		25,574
Celery:													
1919.....	616	516	722	412	507	32	44	141	258	875	1,210	1,086	6,419
1920.....	816	1,017	1,206	708	320	21	69	150	421	1,256	1,811	1,493	9,308
1921.....	1,675	1,716	1,754	866	255	105	137	263	515	1,767	1,410	1,065	12,428
Grapes:													
1919.....						4	460	2,837	13,023	11,592	2,423	10	30,319
1920.....						12	356	4,617	12,001	19,358	2,808	1	39,205
1921.....						12	425	3,166	16,670	14,632	1,974	6	39,888
Lettuce:													
1919.....	767	717	829	1,090	831	181	395	695	653	358	595	937	8,018
1920.....	2,025	1,622	1,353	1,063	1,172	365	980	934	832	606	1,388	1,491	13,821
1921.....	2,356	1,984	2,219	1,974	1,067	670	1,399	1,140	1,302	1,249	1,560	1,765	18,685
Onions:													
1917.....	983	355	232	2,670	2,960	1,156	678	1,434	2,740	4,068	1,318	510	19,152
1918.....	901	1,022	1,023	1,790	2,230	1,111	1,177	1,921	3,075	4,211	2,410	1,017	22,027
1919.....	1,488	1,213	919	1,189	2,432	646	1,844	1,900	3,622	2,963	1,792	987	29,874
1920.....	1,368	1,159	909	1,933	4,212	607	1,030	1,918	3,675	4,910	2,918	1,189	25,950
1921.....	2,038	1,709	1,734	2,511	2,559	823	1,482	2,048	3,361	2,637	1,245	1,162	23,350
Peaches:													
1917.....					41	1,294	5,149	5,713	11,031	3,968	11		27,237
1918.....					1,119	4,021	6,336	5,185	3,025	123			29,409
1919.....					328	3,513	9,210	11,277	6,485	101			39,923
1920.....					45	1,588	6,881	6,281	10,328	1,638	3		25,967
1921.....					1,429	3,955	9,335	7,178	5,107	32			27,066
Pears:													
1919.....	11	1				1,954	3,820	2,763	1,389	190	40		10,158
1920.....			8	3		2,417	3,079	4,850	3,634	779	157		14,950
1921.....	19	29	20			1,512	5,538	3,976	1,279	286	83		12,772
Potatoes (sweet):													
1919.....	1,123	939	745	220	12	6	41	1,328	2,904	2,741	2,311	1,462	13,725
1920.....	1,308	959	1,150	817	460	41	92	686	2,800	3,338	2,638	1,882	16,254
1921.....	2,035	1,624	1,506	792	431	76	243	1,036	2,943	3,191	2,023	2,026	19,041
Potatoes (white):													
1917.....	10,331	8,418	6,083	8,471	9,746	14,719	15,488	12,910	14,202	23,542	13,536	7,120	141,656
1918.....	9,480	10,913	12,559	11,528	12,720	16,989	14,156	11,865	19,811	24,097	13,412	8,801	169,261
1919.....	12,751	8,998	13,741	13,429	9,883	13,303	13,855	14,626	22,257	32,531	17,532	9,572	181,777
1920.....	12,883	8,725	12,772	8,445	6,960	14,777	15,622	13,592	18,155	31,592	23,077	9,761	178,585
1921.....	14,106	11,970	16,154	14,893	14,987	17,645	17,041	16,113	26,040	43,250	16,738	10,199	219,438
Strawberries:													
1917.....			97	1,383	6,505	6,439	640						15,065
1918.....		11	355	1,122	5,321	1,417	177	31	18				8,452
1919.....			49	911	4,598	2,265	147	101	34				8,105
1920.....			44	887	3,511	3,473	403	112	58	2			8,493
1921.....	10	40	675	2,128	6,002	1,763	29	11	13	9	1		10,681
Tomatoes:													
1917.....	115	74	22	814	2,961	2,838	2,364	1,894	1,868	1,056	94	15	14,115
1918.....		13	487	1,448	1,568	3,028	1,967	2,124	3,171	1,361	281	23	15,471
1919.....	39	109	874	1,027	1,924	3,070	1,471	850	2,798	1,899	403	39	14,593
1920.....	298	472	1,340	468	763	3,180	2,199	1,594	3,539	1,491	216	26	15,556
1921.....	33	273	938	1,686	2,754	4,392	1,861	1,071	2,833	847	428	53	17,169
Watermelons:													
1919.....					299	4,986	15,011	8,856	1,677	29	2		30,860
1920.....					18	6,417	20,199	10,299	2,174	65	18	65	39,275
1921.....				7	1,086	11,248	19,872	12,243	1,957	70			46,183

SUGAR.

TABLE 269.—*Sugar: Production in the United States and its possessions, 1856-57 to 1921-22.*¹

Data for 1912-13 and subsequently beet sugar, also Louisiana and Hawaii cane sugar, estimated by United States Department of Agriculture, Porto Rico, by Treasury Department of Porto Rico; Philippine Islands, production estimated by the Philippine Department of Agriculture and exports for years ending June 30. For sources of data for earlier years, see Yearbook for 1913, p. 640. A short ton is 2,000 pounds.

Year.	Beet sugar (chiefly refined).	Cane sugar (chiefly raw).					Total.
		Louisiana.	Other States. ²	Porto Rico.	Hawaii.	Philippine Islands. ³	
Average:	Short tons.	Short tons.	Short tons.	Short tons.	Short tons.	Short tons.	Short tons.
1856-57 to 1860-61.....	.....	132,402	5,978	75,364	.....	46,448	260,190
1861-62 to 1865-66.....	269	74,036	1,945	71,765	.....	51,483	202,503
1866-67 to 1870-71.....	448	41,768	3,818	96,114	.....	81,485	226,633
1871-72 to 1875-76.....	403	67,341	4,113	87,606	(4)	119,557	279,020
1876-77 to 1880-81.....	470	104,920	5,327	76,579	27,040	169,067	383,403
1881-82 to 1885-86.....	692	124,868	7,280	87,441	76,075	189,277	485,633
1886-87 to 1890-91.....	1,922	163,049	8,439	70,112	125,410	186,129	565,091
1891-92 to 1895-96.....	19,406	268,655	6,634	64,280	162,538	286,629	807,142
1896-97 to 1900-1901.....	58,287	282,399	4,405	61,292	282,585	134,722	823,690
1901 2 to 1905 6.....	239,730	352,053	12,126	111,478	403,308	108,978	1,257,673
1906 7 to 1910-11.....	479,133	318,544	13,664	282,136	516,011	115,832	1,785,370
1901 2.....	181,606	360,277	1,048	103,152	555,611	75,011	1,082,705
1902 3.....	218,406	368,734	4,169	100,576	437,991	123,108	1,252,984
1903 4.....	240,601	255,891	22,176	138,096	307,475	82,855	1,107,100
1904 5.....	241,113	308,195	16,800	151,088	426,248	125,271	1,249,715
1905 6.....	312,921	377,162	13,140	214,480	521,213	138,615	1,485,861
1906 7.....	483,612	257,600	14,560	206,864	440,917	132,602	1,535,255
1907 8.....	463,628	380,800	13,110	230,095	521,123	167,242	1,776,328
1908 9.....	425,887	397,600	16,800	277,093	535,156	124,876	1,776,409
1909-10.....	512,169	361,000	11,200	246,786	517,030	140,783	1,892,328
1910-11.....	510,172	312,720	12,320	349,840	566,821	164,658	1,946,531
1911 12.....	599,500	352,874	8,000	371,076	595,038	205,046	2,131,534
1912 13.....	602,556	153,573	9,000	398,001	546,524	344,077	2,144,731
1913 14.....	733,101	292,698	7,800	351,606	612,000	308,339	2,105,004
1914 15.....	722,054	242,700	3,920	346,490	616,000	321,192	2,382,256
1915-16.....	874,220	137,500	1,120	483,590	592,763	412,274	2,501,467
1916-17.....	820,657	303,900	7,000	503,081	644,603	425,260	2,704,567
1917-18.....	765,207	243,800	2,240	453,791	576,700	474,745	2,519,286
1918-19.....	760,950	280,900	3,500	406,002	600,312	453,346	2,605,010
1919-20.....	726,451	121,000	1,125	485,071	556,343	466,912	2,359,902
1920-21.....	1,089,021	169,127	0,987	489,818	521,739	608,499	2,885,211
1921-22.....	1,020,489	324,431	3,270	.....	.....	.....	.....

¹ Census returns give production of beet sugar for 1899 as 81,729 short tons; for 1901, 233,921; 1909, 791,682; production of cane sugar in Louisiana for 1899, 59,974 short tons; 1899, 226,001 hogheads; 1899, 221,726 hogheads; 1899, 80,706 hogheads; 1899, 171,706 hogheads; 1899, 146,662 short tons; 1898, 278,497 short tons; 1899, 149,833, and 1909, 345,516 short tons; cane sugar in other States, 1899, 491 short tons; in 1899, 21,576 hogheads; in 1899, 9,236 hogheads; in 1899, 6,337 hogheads; in 1899, 7,106 hogheads; in 1899, 4,580 short tons; in 1899, 1,691; and in 1909, 8,687 short tons.

² Includes Texas only, subsequent to 1902-3. Unofficial returns prior to 1918-19.

³ Exports for years ending June 30.

⁴ Complete data not available for this period. Production in 1878-79, 1,254 short tons; in 1879-80, 1,304 short tons.

⁵ Production.

SUGAR—Continued.

TABLE 270.—*Sugar beets and beet sugar: Production in the United States, 1912-1921.*

Item and year.	Area and production of sugar beets. ¹									
	California.	Colorado.	Idaho.	Michigan.	Nebraska.	Ohio.	Utah.	Wisconsin.	Other States.	United States.
Planted (1,000 acres):										
1920.....	136	254	58	164	79	54	116	29	88	978
1921.....	136	214	53	164	72	36	111	18	78	882
Harvested (1,000 acres):										
1920.....	123	220	45	150	72	49	113	21	79	872
1921.....	121	200	41	148	72	33	112	17	71	815
Per cent of planted:										
1920.....	90.50	86.69	78.32	91.31	91.63	91.28	96.96	71.33	88.54	89.08
1921.....	88.91	93.48	78.56	90.26	100.66	91.20	101.21	91.48	89.63	92.36
Beets paid for (1,000 short tons):										
1920.....	1,074	2,325	396	1,313	718	426	1,390	190	696	8,538
1921.....	1,046	2,279	380	1,153	773	264	1,152	148	588	7,782
Yield per acre (short tons):										
1920.....	8.74	10.58	8.77	8.78	9.93	8.86	12.35	9.19	8.75	9.79
1921.....	8.67	11.39	9.18	7.89	10.72	8.10	10.26	8.82	8.23	9.55
Farm value (1,000 dollars):										
1920.....	14,096	27,627	4,787	13,236	8,587	4,313	16,713	1,940	8,026	99,324
1921.....	7,841	14,316	2,280	7,002	5,076	1,583	6,341	1,034	3,681	49,154
Price to growers per short ton (dollars):										
1920.....	13.13	11.88	12.10	10.08	11.96	9.89	12.03	10.20	11.52	11.63
1921.....	7.50	6.28	6.00	6.07	6.57	6.00	5.51	7.00	6.26	6.32
Factories operating (number)										
1920.....	10	17	8	17	5	5	18	5	12	97
1921.....	9	15	7	17	5	5	18	5	11	92
Average length of campaign (days):										
1920.....	90	98	72	87	110	100	102	80	70	91
1921.....	84	95	60	71	106	62	78	51	60	76
Sugar made (chiefly refined):										
1920 (1,000 short tons).....	168	294	57	166	90	47	163	21	83	1,089
1921 (1,000 short tons).....	171	295	57	122	105	26	156	14	74	1,020
Sugar beets used:										
Area harvested—										
1920 (1,000 acres).....	123	220	45	150	72	49	113	21	79	872
1921 (1,000 acres).....	121	200	41	148	72	33	112	17	71	815
Average yield per acre—										
1920 (short tons).....	8.56	9.85	8.97	8.32	9.26	7.77	11.20	8.16	8.07	9.17
1921 (short tons).....	8.62	10.79	8.57	7.55	10.12	7.61	9.66	7.96	7.69	9.10
Beets worked—										
1920 (1,000 short tons).....	1,052	2,166	405	1,244	670	382	1,261	169	642	7,991
1921 (1,000 short tons).....	1,040	2,159	355	1,117	730	248	1,084	133	548	7,414
Analysis of beets:										
Percentage of sucrose—										
1920 (per cent).....	17.66	15.81	16.26	15.79	15.74	15.44	15.02	15.86	15.46	15.99
1921 (per cent).....	17.80	15.66	17.45	13.28	16.60	13.41	16.52	13.47	15.41	15.77
Purity coefficient—										
1920 (per cent).....	81.44	85.15	86.42	84.04	83.94	82.45	84.27	82.53	83.12	83.96
1921 (per cent).....	81.46	83.28	86.54	81.68	84.55	81.41	84.72	82.11	81.89	83.09
Recovery of sucrose.										
Percentage of weight of beets—										
1920 (per cent).....	15.97	13.60	13.98	13.34	13.37	12.31	12.89	12.40	13.06	13.63
1921 (per cent).....	16.48	13.66	15.99	10.95	14.43	10.46	14.37	10.59	13.50	13.76
Percentage of sucrose in beets—										
1920 (per cent).....	90.43	86.02	85.98	84.48	84.94	79.73	82.52	78.18	84.48	85.24
1921 (per cent).....	92.58	87.23	91.63	82.45	86.93	78.00	86.99	78.62	87.61	87.25
Loss:										
1920 (per cent).....	1.69	2.21	2.28	2.45	2.37	3.13	2.73	3.46	2.40	2.36
1921 (per cent).....	1.32	2.00	1.46	2.33	2.17	2.95	2.15	2.88	1.91	2.01

¹ Acreage and production of beets are credited, as in former reports, to the State in which the beets were made into sugar.

SUGAR—Continued.

TABLE 270.—*Sugar beets and beet sugar: Production in the United States, 1912-1921—Continued.*

Item.	United States.									
	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921
Planted (1,000 acres).....	.....	635	515	664	768	807	690	890	978	882
Harvested (1,000 acres).....	555	580	483	611	665	665	594	692	872	815
Per cent of planted.....	.....	91.33	93.94	92.02	86.67	82.42	86.13	77.77	89.15	91.73
Beets paid for (1,000 tons).....	5,648	5,886	5,585	6,511	6,228	5,980	5,919	6,421	8,538	7,782
Yield per acre (tons).....	10.20	10.10	11.60	10.70	9.36	9.00	10.01	9.27	9.79	9.55
Farm value (1,000 dollars).....	32,871	33,491	30,438	36,950	38,139	44,192	59,494	75,420	99,324	49,154
Price to growers per ton (dollars).....	5.82	5.69	5.45	5.67	6.12	7.39	10.00	11.74	11.63	6.32
Factories operating (number).....	73	71	60	67	74	91	89	89	97	92
Average length of campaign (days).....	86	85	85	92	80	74	81	78	91	76
Sugar made, chiefly refined (1,000 short tons).....	693	733	722	874	821	765	761	726	1,089	1,020
Sugar beets used:										
Area harvested (1,000 acres).....	555	580	483	611	665	665	594	692	872	815
Average yield per acre (short tons).....	9.41	9.76	10.90	10.10	8.90	8.46	9.39	8.50	9.17	9.10
Beets worked (1,000 short tons).....	5,224	5,659	5,288	6,150	5,920	5,626	5,578	5,888	7,991	7,414
Analysis of beet:										
Percentage of sucrose ²	16.31	15.78	16.38	16.49	16.30	16.28	16.18	14.48	15.99	15.77
Purity coefficient ³ (per cent).....	84.49	83.22	83.69	84.38	84.74	83.89	81.70	82.84	83.96	83.09
Recovery of sucrose. ⁴										
Percentage of weight of beet.....	13.26	12.96	13.65	14.21	13.86	13.60	13.64	12.34	13.63	13.76
Percentage of sucrose in beets.....	81.30	82.13	83.33	86.17	85.03	83.54	81.30	85.22	85.24	87.25
Loss (per cent) ⁵	3.05	2.82	2.73	2.28	2.44	2.68	2.54	2.14	2.36	2.01

² Based upon weight of beets.³ Percentage of sucrose (pure sugar) in the total soluble solids of the beets.⁴ Percentage of sucrose actually extracted by factories.⁵ Percentage of sucrose (based upon the weight of beets) remaining in molasses and pulp.TABLE 271.—*Cane-sugar production of Louisiana, 1911-1921.*

[Figures for 1920 are from returns made before the end of the season, and are subject to revision.]

Year of cane harvest.	Factories in operation.	Sugar made.	Average sugar made per ton of cane.	Cane used for sugar.			Molasses made. ¹	
				Area.	Average per acre.	Production.	Total.	Per ton of sugar.
	<i>Number.</i>	<i>Short tons.</i>	<i>Pounds.</i>	<i>Acres.</i>	<i>Short tons.</i>	<i>Short tons.</i>	<i>Gallons.</i>	<i>Gallons.</i>
1911.....	188	352,874	120	310,000	19	5,887,292	35,062,525	99
1912.....	126	153,573	142	197,000	11	2,162,574	14,302,169	93
1913.....	153	292,698	139	248,000	17	4,214,000	24,046,320	82
1914.....	149	212,700	152	213,000	15	3,199,000	17,177,443	71
1915.....	136	137,500	135	183,000	11	2,018,000	12,743,000	93
1916.....	150	303,900	149	221,000	18	4,072,000	26,154,800	86
1917.....	140	243,600	128	244,000	15.6	3,813,000	30,728,000	126
1918.....	134	280,900	135	231,200	18	4,170,000	28,049,000	100
1919.....	121	121,000	129	179,900	10.5	1,883,000	12,991,000	107
1920.....	122	169,127	136.1	182,843	13.6	2,492,524	16,856,867	100
1921.....	124	324,431	155.2	226,366	18.5	4,180,780	25,423,341	78

¹ Figures for molasses, 1911-1914, are as reported by the Louisiana Sugar Planters' Association; figures for later years as reported by the Bureau of Markets and Crop Estimates, U. S. Department of Agriculture.

SUGAR—Continued.

TABLE 272.—Area of sugar cane and production of cane sirup, United States, 1920 and 1921.

State.	Total cane area.		Area harvested for sirup.		Sirup made.	
	1921	1920	1921	1920	1921	1920
	Acres.	Acres.	Acres.	Acres.	Gallons.	Gallons.
South Carolina.....	8,700	8,200	8,200	7,800	820,000	853,000
Georgia.....	61,100	53,100	45,200	44,100	7,322,000	9,697,000
Florida.....	34,600	28,000	30,000	24,000	6,300,000	6,110,000
Alabama.....	71,000	55,000	60,000	42,000	8,760,000	7,665,000
Mississippi.....	39,200	33,100	33,700	28,300	7,853,000	7,358,000
Louisiana.....	298,100	268,300	21,500	18,300	7,033,000	4,640,000
Texas.....	18,000	16,400	12,000	7,100	3,192,000	2,215,000
Arkansas.....	3,000	3,200	2,400	2,500	437,000	437,000
Total.....	523,100	465,300	213,000	174,100	41,467,000	38,980,000

NOTE.—Care has been taken to exclude sorghum from the above estimates, since this crop is sometimes confused with sugar cane. The production of molasses (a by-product from sugar) in Louisiana is forecast at 22,568,000 gallons for 1921, as compared with 16,857,000 gallons in 1920.

TABLE 273.—Total and per capita sugar supply of the United States, 1901-1920.

The "supply" shown below consists of domestic production, plus imports, minus exports, and is quoted from the Statistical Abstract of the United States for 1918, pp. 560-561, for all years except 1919. Figures for 1919 are based upon the Bureau of Crop Estimates reports on production and the Bureau of Foreign and Domestic Commerce reports on exports and imports. The average per capita supply is computed from the Census estimates of population for June 1, each year. No allowance has been made for sugar carried over from one fiscal year to the next.

Year ending June 30.	Supply ("consumption") of sugar.		Year ending June 30.	Supply ("consumption") of sugar.		Year ending June 30.	Supply ("consumption") of sugar.		Year ending June 30.	Supply ("consumption") of sugar.	
	Total.	Per capita.		Total.	Per capita.		Total.	Per capita.		Total.	Per capita.
	Mil-lions of lbs.	Lbs.		Mil-lions of lbs.	Lbs.		Mil-lions of lbs.	Lbs.		Mil-lions of lbs.	Lbs.
1901.....	5,585	71.96	1906.....	6,491	75.74	1911.....	7,236	77.34	1916.....	7,960	79.10
1902.....	5,019	63.55	1907.....	7,090	81.19	1912.....	7,802	82.78	1917.....	8,468	82.97
1903.....	6,380	78.92	1908.....	6,591	74.11	1913.....	8,324	85.73	1918.....	8,090	78.20
1904.....	5,692	68.66	1909.....	7,283	80.43	1914.....	8,794	89.91	1919.....	8,727	88.72
1905.....	5,026	71.66	1910.....	7,360	79.87	1915.....	8,627	86.94	1920.....	9,736	92.10
Ave. 1901-1905.....	5,734	70.91	Ave. 1906-1910.....	6,963	78.27	Ave. 1911-1915.....	8,169	84.48	Ave. 1916-1920.....	8,596	83.56
									1921 ¹	10,568	98.65

¹ Preliminary.

SUGAR—Continued.

TABLE 274.—Cane sugar production of Hawaii, 1913-1920.

[Figures for 1920 are subject to revision.]

Island, and year ending Sept. 30.	Average length of campaign.	Sugar made	Cane used for sugar.			Total area in cane	Average extraction of sugar.	
			Area harvested	Average yield per acre.	Production		Per cent of cane.	Per short ton of cane.
Hawaii:	<i>Days.</i>	<i>Short tons.</i>	<i>Acres</i>	<i>Short tons.</i>	<i>Short tons.</i>	<i>Acres.</i>	<i>Per cent.</i>	<i>Pounds.</i>
1921.....	191	195,267	52,600	34	1,790,000	198,200	10.91	218
1920.....	168	186,062	50,800	31	1,595,000	115,400	11.67	238
Kauai:								
1921.....	219	83,539	19,800	45	884,000	42,700	9.45	189
1920.....	201	104,938	21,900	41	897,000	43,800	11.79	234
Main:								
1921.....	177	118,630	19,200	46	876,000	38,500	13.31	265
1920.....	138	135,896	19,900	38	947,000	44,300	14.35	287
Oahu:								
1921.....	243	126,113	21,500	51	1,167,000	47,100	11.39	228
1920.....	220	128,831	21,500	48	1,034,000	45,500	12.46	249
Territory of Hawaii:								
1921.....	202	521,579	113,100	41	4,657,000	235,500	11.20	224
1920.....	175	555,727	114,100	39	4,473,000	217,900	12.42	248
1919.....	178	630,312	119,700	40	4,744,000	239,000	12.65	258
1918.....	184	576,700	119,800	41	4,855,000	275,800	11.88	238
1917.....	190	644,663	123,900	42	5,220,000	245,100	12.35	247
1916.....	180	592,763	115,419	42	4,859,421	217,732	12.20	244
1915.....	195	646,009	113,200	46	5,185,000	239,800	12.46	249
1914.....	183	612,000	112,700	43	4,900,000	.....	12.19	270
1913.....	169	546,524	114,600	39	4,476,000	.....	12.21	244

SUGAR—Continued.

TABLE 275.—*Sugar: International trade, calendar years 1909-1920.*

The following kinds and grades have been included under the head of sugar: Brown, white candied, caramel, chancaca (Piloncillo), the maple, muscovado, panela. The following have been excluded: "Candy" (meaning confectionery), confectionery, glucose, grape sugar, jaggery, molasses, and sirups. See "General note, Table 155."

Country.	Average, 1909-1913		1918		1919		1920	
	Imports	Exports.	Imports.	Exports.	Imports.	Exports.	Imports	Exports.
PRINCIPAL EXPORTING COUNTRIES.	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>
Austria-Hungary.....	7,884	1,697,659						18
Barbados.....	1,466	51,657		74,384		113,819		116,043
Belgium.....	15,784	308,952			110,294	50,222	127,356	159,333
Brazil.....	1,234	76,568	74	254,926	231	153,063	13	240,612
British Guiana.....	112,224	212,393		210,340		186,234		187,658
Cuba.....	1,312	4,019,798	294	7,293,915	85	8,995,775		
Dominican Republic.....	21,533	184,708	992	284,624	798	357,885		
Dutch East Indies.....	7,124	2,825,111	5,470	3,395,304	6,195	4,113,514		
Fiji.....	7,771	157,633				144,140		163,520
France.....	372,395	413,795	117,466	136,914	1,254,263	173,835	1,332,178	186,247
Germany.....	6,973	1,746,322					203,166	14,162
Guadeloupe.....	390	75,270		58,651				
Martinique.....	461	85,110		45,661				
Mauritius.....	14	452,516	5	403,931	2	667,616	1	402,262
Netherlands.....	165,443	400,980	25	51,027	105,134	86,240	92,826	167,827
Peru.....	1,451	262,472	164	436,485	195	569,920		
Philippine Islands.....	7,900	358,865	445	602,425	3,261	299,959	5,379	397,579
Reunion.....	24	83,316		83,246				
Russia.....	7,487	587,028						
Trinidad and Tobago.....	11,045	87,510	299	78,634	39	84,085		111,948
PRINCIPAL IMPORTING COUNTRIES.								
Argentina.....	103,350	144	73,489	21	181,318	3,203		
Australia.....	152,465	535	117,770	1,956	252,683	340		
British India.....	1,431,980	53,222	1,190,562	71,221	941,930	52,364	704,255	88,301
British South Africa.....	61,282	1,513	45,081	5,533	9,561	38,228	4,339	32,869
Canada.....	695,755	1,639	637,926	6,872	1,059,898	246,980	780,877	76,980
Chile.....	169,931	181	195,774	7,249	198,022	1,373	163,006	66
China.....	687,243	29,867	1,165,173	23,905	691,717	32,833	514,805	46,621
Denmark.....	43,627	45,073	108	23,263	4,142	20,308	1,038	38,558
Egypt.....	86,041	16,171	40,704	37,659	27,574	27,973	82,407	30,412
Finland.....	100,153		7,548		62,468		55,203	
Italy.....	18,499	603	81,638	235	175,224	54	25,078	59
Japan.....	353,885	120,407	493,720	259,193	606,457	151,841	396,509	135,755
New Zealand.....	125,924	1,265,955	112,974	2,335	131,340	2,643	138,267	1,017
Norway.....	104,651		75,635		187,229		200,313	
Persia.....	218,703	11,114	124,875	3,701	82,557	5,636		
Portugal.....	78,262		44,831	31	64,741	24		
Singapore.....	163,226	93,878	415,363	358,265			91,848	78,849
Switzerland.....	236,403		160,640		231,322	1	279,056	1
United Kingdom.....	3,707,211	65,267	2,016,755	1,804	3,509,118	2,867	3,035,175	5,212
United States.....	4,245,034	79,368	5,170,976	407,296	7,023,620	1,475,408	8,073,760	924,192
Other countries.....	954,557	287,612	373,963	190,257	406,141	743,905	424,136	548,758
Total.....	14,250,121	14,944,141	12,993,315	14,794,263	17,327,573	18,835,381	16,863,116	4,154,919

¹ Four-year average.² One-year average.³ Three-year average.

SUGAR—Continued.

TABLE 276.—*Sugar production of undermentioned countries, campaigns of 1909-10 to 1919-20.*

BEET SUGAR (RAW)

Country.	Average 1909-10 to 1913-14.	1915-16	1916-17	1917-18	1918-19	1919-20	1920-21
NORTH AMERICA.							
United States.....	<i>Short tons.</i> 609,620	<i>Short tons.</i> 874,220	<i>Short tons.</i> 820,657	<i>Short tons.</i> 765,207	<i>Short tons.</i> 760,950	<i>Short tons.</i> 736,451	<i>Short tons.</i> 1,090,021
Canada.....	11,457	19,758	8,512	11,698	25,016	18,920	38,823
Total.....	621,077	893,978	829,169	776,895	785,966	745,371	1,128,844
EUROPE.							
Austria.....	43,194					5,657	15,432
Belgium.....	276,075	119,926	140,473	135,869	77,954	151,515	267,859
Bulgaria.....	7,688	12,777	9,915	11,513	3,733	13,074	8,267
Czechoslovakia.....	1,017,237				687,553	559,325	770,386
Denmark.....	127,602	143,475	123,584	140,653	117,836	176,365	131,922
France.....	759,426	149,802	204,405	220,752	121,374	170,969	370,032
Germany.....	2,296,131	1,678,402	1,721,250	1,726,483	1,433,807	808,301	1,211,644
Hungary.....	467,712	303,999	289,107	173,021	97,517	12,477	36,376
Italy.....	208,675	165,781	159,690	102,100	119,521	185,001	149,913
Yugoslavia.....	20,948						
Netherlands.....	216,311	263,826	286,102	211,891	181,986	263,110	314,486
Poland.....	279,374					198,414	188,493
Rumania.....	59,934					1,213	16,531
Russia.....	1,726,231	1,823,602	1,456,800	1,133,804	317,793	85,537	55,115
Spain.....	115,727	117,334	139,280	154,317	169,223	91,089	194,456
Sweden.....	153,581	110,380					180,777
Switzerland.....	4,390	2,616	1,981				
Total.....	7,819,296	4,921,950	4,532,620	4,013,436	3,378,340	2,722,053	3,824,992
OCEANIA.							
Australia.....	719	627	2,182	1,901			
Grand total.....	8,441,092	5,816,555	5,363,971	4,792,265	4,164,336	3,467,424	4,933,836

CANE SUGAR.

NORTH AMERICA.							
United States:							
Louisiana.....	301,173	137,500	303,900	243,600	280,900	121,000	163,127
Texas.....	9,664	1,120	7,000	2,240	3,500	1,125	6,987
Hawaii.....	567,495	592,763	644,663	576,700	600,312	556,343	521,759
Porto Rico.....	363,474	483,590	503,081	453,794	406,002	485,071	489,818
Virgin Islands.....	9,212	15,000	6,720	6,018	10,080	12,888	
Central America:							
British Honduras.....	575	784					
Costa Rica.....	2,922	5,740	6,538		4,225		
Guatemala.....	8,281	33,069	33,069	38,069	25,142	14,816	
Honduras.....		2,960					
Nicaragua.....	5,000	10,000	15,000	12,000	12,000	16,000	
Salvador.....	13,616	18,818		20,385	30,515	15,301	
Mexico.....	163,000	71,650	55,115	38,580	78,400	103,040	110,230
West Indies:							
British—							
Antigua.....	12,919	12,218	20,769	19,181	14,679	18,667	11,396
Barbados.....	27,788	32,411	77,691	58,195	81,301	77,983	62,957
Jamaica.....	23,856	25,562	43,731	38,291	48,160	52,500	42,560
Montserrat.....	222	467	329	329	65	151	151
St. Christopher.....	13,252	10,244	19,010	16,854			
St. Lucia.....	5,436	5,184	5,011	3,616	4,100	4,928	5,682
St. Vincent.....	319	253	599	632	638	1,272	560
Trinidad and Tobago.....	51,275	65,881	71,939	79,140	50,687	53,592	65,426
Cuba.....	2,295,353	3,436,619	3,441,771	3,957,061	4,596,710	4,209,349	4,408,365
Dominican Republic.....	106,539	140,443	149,943	172,800	186,682	225,920	229,278
French—							
Guadeloupe.....	40,917	39,256	35,690	30,864	29,326		
Martinique.....	42,567	37,968	23,017	22,831	11,230		
Total.....	4,065,391	5,229,530	5,464,616	5,786,110	6,477,657	5,970,949	6,124,296

SUGAR—Continued.

TABLE 276.—*Sugar production of undermentioned countries, campaigns of 1909-10 to 1919-20—Continued.*

CANE SUGAR—Continued.

Country.	Average 1909-10 to 1913-14.	1915-16	1916-17	1917-18	1918-19	1919-20	1920-21
SOUTH AMERICA.							
Argentina.....	<i>Short tons.</i> 193,833	<i>Short tons.</i> 164,572	<i>Short tons.</i> 92,669	<i>Short tons.</i> 97,085	<i>Short tons.</i> 139,463	<i>Short tons.</i> 228,695	<i>Short tons.</i> 230,990
Brazil.....	38,274	486,114	413,362	492,728	440,479	496,035	579,959
Guiana:							
British.....	106,194	128,007	121,163	120,467	90,330	137,520	106,400
Dutch.....	12,571	9,091	15,829	12,357	8,960	.....	.....
Paraguay.....	1,363	2,355	869	893	619	2,745	.....
Peru.....	210,608	304,236	279,077	316,890	336,000	392,000	385,805
Total.....	562,873	1,094,373	922,969	1,940,335	1,015,871	1,326,395	1,303,154
EUROPE.							
Spain.....	17,059	4,760	5,053	6,297	6,921	7,452	8,864
ASIA.							
British India.....	2,614,326	2,950,080	3,037,600	3,708,320	2,617,440	3,361,086	2,760,800
Formosa.....	192,299	361,513	504,897	518,089	379,323	224,614	383,805
Japan.....	75,718	78,391	99,914	141,438	102,428	.....	.....
Java.....	1,513,736	1,796,558	2,008,521	1,960,118	1,478,103	1,172,796	1,378,657
Philippine Islands.....	170,447	412,274	425,266	474,745	453,346	466,912	608,499
Total.....	4,566,526	5,598,821	6,096,198	6,802,710	5,030,640	5,622,408	5,333,701
AFRICA.							
Egypt.....	67,128	109,088	112,080	87,620	83,663	99,207	88,184
Mauritius.....	233,671	236,463	230,419	248,531	278,187	267,303	283,385
Natal.....	88,165	112,060	128,240	119,000	164,080	168,000	176,368
Portuguese East Africa.....	27,800	41,123	40,406	47,926	22,724	38,680	41,092
Reunion.....	41,658	43,320	49,604	46,462	55,115	35,641	44,092
Total.....	458,422	541,999	560,749	549,539	603,769	608,739	638,121
OCEANIA.							
Australia.....	216,331	179,788	216,201	354,941	219,358	181,774	183,926
Fiji.....	84,629	103,577	134,932	109,014	72,070	81,743	66,138
Total.....	300,960	283,365	351,133	463,955	291,428	263,517	250,064
Total cane sugar.....	9,971,231	12,754,793	13,400,777	14,648,916	13,426,286	13,799,460	13,656,260
Total beet and cane sugar.....	18,412,323	13,571,348	18,764,749	19,441,181	17,593,862	17,260,834	18,610,006

TABLE 277.—*Sugar: Total production of countries as reported 1895-1896 to 1920-1921.*

Year.	Production.			Year.	Production.		
	Cane. ¹	Beet.	Total.		Cane. ¹	Beet.	Total.
1895-96.....	<i>Short tons.</i> 3,259,000	<i>Short tons.</i> 4,832,000	<i>Short tons.</i> 8,091,000	1908-9.....	<i>Short tons.</i> 8,654,000	<i>Short tons.</i> 7,350,000	<i>Short tons.</i> 16,004,000
1896-97.....	3,171,000	5,549,000	8,720,000	1909-10.....	9,423,000	6,991,000	16,414,000
1897-98.....	3,206,000	5,457,000	8,663,000	1910-11.....	9,540,000	9,042,000	18,582,000
1898-99.....	3,355,000	5,616,000	8,971,000	1911-12.....	10,275,000	7,072,000	17,347,000
1899-1900.....	3,399,000	6,262,000	9,661,000	1912-13.....	10,908,000	9,503,769	20,411,769
1900-1901.....	4,084,000	6,795,000	10,879,000	1913-14.....	11,270,200	9,433,783	20,703,983
1901-2.....	6,818,000	7,743,000	14,561,000	1914-15.....	11,262,907	8,330,628	19,593,535
1902-3.....	6,732,000	6,454,000	13,186,000	1915-16.....	12,754,793	5,816,555	18,571,348
1903-4.....	6,909,000	6,831,000	13,740,000	1916-17.....	13,400,777	5,363,971	18,764,749
1904-5.....	7,652,000	5,525,000	13,177,000	1917-18.....	14,648,945	4,792,235	19,441,181
1905-6.....	7,551,000	8,090,000	15,641,000	1918-19.....	13,426,286	4,161,336	17,587,622
1906-7.....	8,385,000	7,587,000	15,972,000	1919-20.....	13,799,460	3,467,424	17,266,884
1907-8.....	7,926,000	7,390,000	15,316,000	1920-21.....	13,656,260	4,953,836	18,610,096

¹ Prior to 1901-2 these figures include exports instead of production for British India.

SUGAR BEETS.

TABLE 278.—*Sugar beets: Area and production in undermentioned countries, 1909-1920.*

Country	Area.				Production.			
	Average, 1909-1913	1918	1919	1920	Average, 1909-1913	1918	1919	1920
NORTH AMERICA								
United States.....	1,000 acres. 568	1,000 acres. 594	1,000 acres. 692	1,000 acres. 873	1,000 short tons 5,555	1,000 short tons 5,949	1,000 short tons 5,888	1,000 short tons 7,491
Canada.....	18	18	25	36	174	180	240	212
Total.....	586	612	7,717	909	5,729	6,129	6,128	8,411
EUROPE								
Austria.....	642	21	13	18	8,202	188	83	2
Hungary proper.....	432			78	5,275	97	13	7
Croatia-Slavonia.....	10				73			
Bosnia-Herzegovina.....	3				12			
Belgium.....	142		112	131	1,720		793	16
Bulgaria.....	8	4	21	23	81	55	130	1
Czechoslovakia.....		455	433	517		5,034	4,008	53
Denmark.....		89	102	95	1,025	1,041	1,132	9
England.....	4							
Finland.....			1	3			6	
France.....	623	148	154	222	7,254	1,051	1,325	2,266
Alsace-Lorraine.....		1		3		11		
Germany.....	1,335	906	668	692	18,509	9,600	5,287	7,241
Italy.....	143	166	166	126	2,465	1,250	1,881	1,823
Yugoslavia.....				43			66	88
Roumania.....	154	92	122	157	2,117	1,372	1,647	2,320
Russia proper.....	34	18	8	8	316	54		
Poland.....	1,578				12,119			
North Caucasus (Kuban).....	179		60	175	1,399			
Spain.....	8			84				
Sweden.....	126	163	134	176	2,130	742	1,160	14
Switzerland.....	69	75	87	104	940	902	1,003	1,111
.....	2	1	85	1	21	14	11	
Total.....	5,583	2,115	2,106	2,572	63,742	21,401	18,582	14,951
Grand total.....	6,149	2,727	2,823	3,481	69,471	27,530	24,710	23,362

MAPLE SUGAR AND SIRUP.

TABLE 279.—*Maple sugar and sirup production, 1859-1921.*

[Figures for 1921 subject to revision.]

CENSUS.

State and year.	Trees tapped	Sugar made.	Sirup made.	Total product in terms of sugar. ¹	Average per tree.	
					As sugar.	As sirup.
United States:	Number.	Pounds.	Gallons.	Pounds.	Pounds.	Gallons.
1830.....		234,516,266	(3)			
1840.....		34,253,436	(3)			
1859.....		40,120,205	1,597,589	52,909,917		
1869.....		28,443,645	921,057	35,812,101		
1879.....		38,576,061	1,796,048	59,944,445		
1889.....		32,952,927	2,258,376	51,019,935		
1899.....		11,328,770	2,056,611	28,381,658		
1909.....	18,899,523	14,024,206	4,106,418	46,911,570	2.48	0.31
1919.....	17,457,144	9,691,854	3,507,745	37,753,814	2.16	.27

¹ One gallon of sirup taken as equivalent to 8 pounds of sugar.² Reported as "sugar" (not "maple sugar"), but for States which are too far north to make cane sugar. No beet sugar was made at this time.³ Not reported.

MAPLE SUGAR AND SIRUP—Continued.

TABLE 279.—Maple sugar and sirup production, 1839-1921—Continued.

BUREAU OF MARKETS AND CROP ESTIMATES.

State and year.	Trees tapped.	Sugar made.	Sirup made.	Total product in terms of sugar. ¹	Average per tree.	
					As sugar.	As sirup.
	<i>Number.</i>	<i>Pounds.</i>	<i>Gallons.</i>	<i>Pounds</i>	<i>Pounds.</i>	<i>Gallons.</i>
Total 13 States: ²						
1917.....	17,466,400	10,838,650	4,286,100	45,127,450	2.58	0.32
1918.....	19,312,200	13,270,865	4,905,264	52,512,977	2.72	.34
1919.....	17,531,463	10,466,368	3,528,160	38,691,690	2.21	.28
1920.....	17,638,013	7,070,291	3,339,682	23,768,300	1.92	.24
1921.....	15,234,100	4,891,732	2,400,707	24,097,400	1.58	.20
Maine:						
1919.....	304,000	63,232	41,496	395,200	1.30	.16
1920.....	323,000	35,840	59,520	512,000	1.60	.20
1921.....	284,800	11,952	48,306	398,400	1.40	.17
New Hampshire:						
1919.....	800,000	409,600	103,800	1,293,000	1.60	.20
1920.....	900,000	324,000	162,000	1,620,000	1.80	.22
1921.....	800,000	456,000	133,000	1,520,000	1.90	.24
Vermont:						
1919.....	5,955,513	6,105,780	650,152	11,307,000	1.90	.24
1920.....	5,955,513	4,068,000	904,000	11,300,000	1.90	.24
1921.....	5,100,000	2,937,000	745,375	8,900,000	1.75	.22
Massachusetts:						
1919.....	252,751	150,360	48,530	537,000	2.12	.27
1920.....	309,500	158,490	53,564	587,000	1.90	.24
1921.....	269,300	112,640	49,920	512,000	1.90	.24
Connecticut:						
1919.....	9,000	6,720	2,660	28,000	3.11	.39
1920.....	12,000	3,600	4,050	36,000	3.00	.38
1921.....	8,000	6,480	2,190	24,000	3.00	.38
New York:						
1919.....	4,827,000	2,516,800	1,115,400	11,440,000	2.37	.30
1920.....	4,875,000	1,755,000	993,375	9,750,000	2.00	.25
1921.....	4,193,000	880,500	623,687	5,870,000	1.40	.17
Pennsylvania:						
1919.....	1,020,000	561,204	263,899	2,672,400	2.62	.33
1920.....	1,061,000	414,851	253,181	2,440,300	2.30	.29
1921.....	806,000	172,800	98,400	960,000	1.20	.15
Maryland:						
1919.....	75,000	150,800	13,650	260,000	3.47	.43
1920.....	76,000	114,000	9,500	190,000	2.50	.31
1921.....	65,000	109,480	16,065	238,000	3.66	.46
West Virginia:						
1919.....	100,000	160,000	30,000	400,000	4.00	.50
1920.....	60,000	85,600	16,050	214,000	3.57	.45
1921.....	40,000	48,000	9,000	120,000	3.00	.38
Ohio:						
1919.....	2,269,190	112,300	687,837	5,615,000	2.47	.31
1920.....	2,156,000	88,620	477,922	3,862,000	1.79	.23
1921.....	1,832,000	45,600	279,667	2,283,000	1.25	.16
Indiana:						
1919.....	560,000	138,880	199,840	1,736,000	3.10	.39
1920.....	560,000	7,810	97,020	784,000	1.40	.18
1921.....	532,000	36,960	149,380	1,232,000	2.32	.29
Michigan:						
1919.....	859,000	56,760	229,162	1,890,000	2.20	.28
1920.....	833,000	44,970	181,750	1,499,000	1.80	.22
1921.....	816,000	52,240	156,720	1,306,000	1.60	.20
Wisconsin:						
1919.....	500,000	33,930	137,134	1,131,000	2.26	.28
1920.....	520,000	19,480	121,750	974,000	1.87	.23
1921.....	494,000	22,020	88,997	734,000	1.48	.19

¹ One gallon of sirup taken as equivalent to 8 pounds of sugar.² These 13 States produced in 1919, 99.4 per cent of the maple sugar crops of the United States and 98.5 per cent of the maple sirup.

MAPLE SUGAR AND SIRUP—Continued.

TABLE 280.—*Maple sugar and sirup: Farm price, 15th of month, 1915-1920.*

Date.	Sugar (cents per pound).							Sirup (dollars per gallon).						
	1915	1916	1917	1918	1919	1920	1921	1915	1916	1917	1918	1919	1920	1921
Feb. 15.....	11.6	12.6	14.7	18.8	22.0	23.3	24.9	1.06	1.08	1.22	1.58	1.86	2.35	2.27
Mar. 15.....	12.5	13.4	14.7	20.5	25.3	31.6	25.7	1.10	1.11	1.50	1.76	1.99	2.58	2.17
Apr. 15.....	12.9	13.9	16.3	22.5	26.9	37.0	25.7	1.10	1.17	1.33	1.80	2.03	2.92	2.21
May 15.....	12.3	13.6	16.2	22.6	26.3	36.0	21.5	1.07	1.15	1.34	1.85	2.02	2.93	2.08
June 15.....	12.4	13.7	15.9	22.0	26.2	35.1	20.7	1.12	1.16	1.33	1.85	2.19	2.84	2.10

SORGHUM FOR SIRUP.

TABLE 281.—*Sorghum for sirup: Acreage, production, and value, by States, 1920 and 1921, and totals, 1917-1921.*

State and year.	Thousands of acres.		Average yield, in gallons per acre.		Production (thousands of gallons).		Average farm price per gallon Dec. 1.		Farm value (thousands of dollars).	
	1920	1921	1920	1921	1920	1921	1920	1921	1920	1921
Virginia.....	14	13	100	83	1,400	1,079	<i>Cents.</i> 105	<i>Cents.</i> 90	1,470	971
West Virginia.....	9	8	100	95	900	767	135	100	1,215	760
North Carolina.....	31	32	97	94	3,007	3,008	100	78	3,007	2,346
South Carolina.....	21	21	100	90	2,100	1,800	100	68	2,100	1,285
Georgia.....	35	37	94	94	3,290	3,478	104	40	3,422	1,391
Florida.....	1	1	142	120	142	120	100	50	142	60
Ohio.....	6	4	91	80	546	320	152	100	830	320
Indiana.....	13	12	82	80	1,066	960	140	100	1,492	960
Illinois.....	11	10	75	88	825	880	145	99	1,196	871
Wisconsin.....	6	2	75	70	450	140	180	140	810	196
Minnesota.....	2	2	100	110	200	220	150	100	300	220
Iowa.....	10	8	90	84	900	672	143	106	1,287	712
Missouri.....	52	28	83	86	4,316	2,408	125	88	5,395	2,119
Nebraska.....	2	2	95	86	190	172	135	103	256	177
Kansas.....	5	5	86	81	430	405	125	92	538	373
Kentucky.....	51	43	95	85	4,845	4,080	107	72	5,181	2,938
Tennessee.....	47	42	90	96	4,230	4,032	101	59	4,272	2,379
Alabama.....	71	90	99	85	7,029	7,650	90	42	6,326	3,213
Mississippi.....	50	53	90	88	4,500	4,664	90	39	4,050	1,819
Louisiana.....	2	1	110	90	220	90	100	52	220	47
Texas.....	36	35	94	87	3,384	3,045	105	70	3,553	2,132
Oklahoma.....	18	18	94	81	1,692	1,458	108	73	1,827	1,064
Arkansas.....	42	45	90	88	3,780	3,960	105	57	3,969	2,257
New Mexico.....	1	1	63	63	63	63	130	95	82	60
Total.....	536	518	92.4	87.9	49,505	45,554	106.9	62.9	52,943	28,670
1919.....	487		80.9		39,413		110.8		43,683	
1918.....	375		79.1		29,643		96.3		28,532	
1917.....	415		90.3		37,472		69.5		26,055	

TEA.

TABLE 282.—*Tea: International trade, calendar years 1909-1920.*

["Tea" includes tea leaves only and excludes dust, sweepings, and yerba mate. See "General note," Table 125.]

Country.	Average, 1909-1913		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORTING COUNTRIES.	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>
British India.....	8,062	267,827	17,199	378,075	15,514	375,560	11,466	270,957
Ceylon.....	11	189,016	3	180,818	2	208,561	1	134,770
China.....	18,869	197,997	6,349	53,479	10,756	91,119	6,069	50,537
Dutch East Indies...	6,742	46,675	7,528	65,931	4,974	117,007	.....	.....
Formosa.....	68	23,640	68	24,848	116	23,009	.....	11,539
Japan.....	590	35,823	281	46,825	415	28,519	540	21,102
PRINCIPAL IMPORTING COUNTRIES.								
Argentina.....	3,890	.....	4,037	.....	3,983	.....	.....	.....
Australia.....	35,442	(²)	45,615	.....	56,857	.....	.....	.....
Austria-Hungary.....	3,424	3	.....	.....	.....	.....	8,780	.....
British South Africa...	5,462	62	10,510	49	7,705	333	7,111	17
Canada.....	37,927	.....	29,964	.....	27,025	.....	36,740	.....
Chile.....	3,505	.....	3,538	.....	5,142	.....	4,690	.....
France.....	2,806	61	3,176	34	4,626	58	4,017	160
French Indo-China...	3,235	1,145	2,431	2,290	2,719	1,989	.....	.....
Germany.....	8,964	23	.....	.....	.....	.....	3,850	25
Netherlands.....	11,383	45	1,412	(²)	69,710	17,039	23,497	63
New Zealand.....	7,542	.....	9,692	.....	8,503	.....	12,518	.....
Persia.....	9,446	125	12,478	56	8,009	280	.....	.....
Russia.....	157,704	866	.....	.....	.....	.....	.....	.....
Singapore.....	6,099	2,375	5,846	3,201	.....	.....	5,515	3,131
United Kingdom.....	293,045	.....	310,037	.....	464,817	.....	389,015	.....
United States.....	98,897	.....	134,418	.....	80,963	.....	99,247	.....
Other countries.....	33,635	4,661	17,429	12	19,315	645	21,622	267
Total.....	756,669	770,604	622,661	755,618	784,649	364,050	618,538	538,898

¹ Two-year average.² Less than 500 pounds.³ Austria, only.

COFFEE.

TABLE 283.—*Coffee: International trade, calendar years 1909-1920.*

The item of coffee comprises unhulled and hulled, ground or otherwise prepared, but imitation or "surrogate" coffee and chicory are excluded. See "General note," Table 125.]

Country.	Average, 1909-1913		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORTING COUNTRIES.	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>
Brazil.....	1,678,282	1,678,282	983,253	983,253	1,714,765	1,714,765	1,524,478	1,524,478
British India.....	1,605	27,780	1,324	14,888	1,872	36,792	5,655	19,407
Colombia.....	104,398	104,398	151,935	151,935	3,713	273,738		
Costa Rica.....	27,515	27,515	25,265	25,265				
Dutch East Indies.....	4,227	54,149	1,747	16,215				
Guatemala.....	85,951	85,951						
Haiti.....	61,943	61,943						
Jamaica.....	8,293	8,293						
Mexico.....	1,167	48,991						
Nicaragua.....	2,138	19,033		25,560		33,688		
Salvador.....	1,593	62,830						
Venezuela.....		111,326	33	88,155	97	179,790		
PRINCIPAL IMPORTING COUNTRIES								
Argentina.....	28,125		48,572		37,541			
Austria-Hungary.....	128,304	8				4,140		
Belgium.....	111,738	33,627			86,861	14,078	39,111	3,407
British South Africa.....	26,703	39	47,887	149	18,349	5	29,704	55
Cuba.....	21,906	4	26,050	(⁵)	23,273	2		
Denmark.....	33,102	152	7,618		62,583	140	44,823	102
Egypt.....	15,654		15,693		16,039		22,855	
Finland.....	28,624		1,606		21,618		14,952	
France.....	245,752	41	300,310	110	457,450	635	323,254	1,983
Germany.....	399,965	1,757					90,602	62
Italy.....	58,278	458	113,848	8	80,405	96	66,509	14
Netherlands.....	283,633	189,288	7,973	1	120,738	28,234	133,749	37,551
Norway.....	29,309		18,028		70,265		24,747	
Russia.....	26,073							
Singapore.....	6,000	4,700	5,125	4,191			25,730	28,789
Spain.....	23,517	9	36,097	13	42,391	130	48,519	5
Sweden.....	74,486	24	24,719		86,118	107	98,412	
Switzerland.....	25,029	62	22,534	2	22,534	100	22,777	75
United Kingdom.....	28,581	241	47,934	8	48,789	71	27,434	108
United States.....	907,899	44,251	1,052,202	44,727	1,373,564	34,352	1,297,439	36,737
Other countries.....	96,640	49,225	79,791	13,061	61,537	6,994	60,608	58
Total.....	2,614,854	2,608,347	1,859,091	1,367,521	2,635,772	2,355,420	2,382,020	1,653,101

¹ Four-year average.

² Three-year average.

³ One-year average.

⁴ Austria, only new boundaries.

⁵ Less than 500 pounds

⁶ Chiefly from Porto Rico.

OIL CAKE AND OIL-CAKE MEAL.

TABLE 284.—Oil cake and oil-cake meal: International trade, calendar years 1909–1920.

[The class called here "oil cake and oil-cake meal" includes the edible cake and meal remaining after making oil from such products as cotton seed, flaxseed, peanuts, corn, etc. See "General note," Table 125.]

Country.	Average, 1909–1913.		1915		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORTING COUNTRIES.	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>
Argentina.....	53,673	124,873	.....	19,258	.....	114,024	.....	.....
Austria-Hungary.....	1,262	208,648	2,063	191,307	2,192	305,134	4,331	258,686
British India.....	7,752	51,370	44,249	2,456	12,312	41,222	14,060	19,290
Canada.....	174	147,468	.....	167,277	.....	281,651	.....	155,784
China.....	.....	151,624	.....	11	.....	148,246	.....	181,782
Egypt.....	288,968	476,863	33,821	5,323	15,604	19,310	16,057	97,001
France.....	10,550	55,115	4,393	11,129	99	34,468	69	78,100
Italy.....	.....	33,764	.....	.....	.....	.....	.....	.....
Mexico.....	.....	1,453,413	.....	.....	.....	.....	.....	.....
Russia.....	.....	1,704,124	37,790	107,063	112,406	1,087,228	228,853	539,362
United States.....	.....	.....	.....	.....	.....	.....	.....	.....
PRINCIPAL IMPORTING COUNTRIES.	.....	.....	.....	.....	.....	.....	.....	.....
Belgium.....	543,648	155,373	.....	.....	39,309	76,802	22,582	70,595
Denmark.....	1,002,329	15,777	753	.....	292,103	1	569,272	23
Dutch East Indies.....	2,500	13,242	1,646	45	237	119,322	.....	.....
Finland.....	25,333	2,125	3,015	.....	69,631	.....	22,779	.....
Germany.....	1,683,416	525,108	.....	.....	.....	.....	111,101	7,590
Japan.....	189,858	.....	183,118	285,673	.....	.....	307,347	5,688
Netherlands.....	707,116	219,819	213	(²)	223,859	11,918	197,312	203,258
Norway.....	55,112	2,889	48,432	45,341	.....	13,460	28,003	2
Sweden.....	346,755	1,535	14,160	131,736	.....	.....	141,879	.....
Switzerland.....	69,352	1,413	24,808	1	91,785	4	53,923	2,382
United Kingdom.....	790,855	161,798	24,232	157	601,604	11,359	460,766	43,711
Other countries.....	30,320	62,610	863	25,897	816	51,973	203	57,985
Total.....	5,812,002	5,681,538	425,546	529,924	1,954,637	2,316,152	2,178,542	1,776,404

¹ Three-year average.² Less than 500 pounds.

ROSIN.

TABLE 285.—*Rosin: International trade, calendar years 1909-1920.*

[For rosin, only the resinous substance known as "rosin" in the exports of the United States is taken.
See "General note," Table 125.]

Country.	Average, 1909-1913		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORTING COUNTRIES.	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>
France.....	2,132	118,286	1,062	36,516	1,795	117,200	1,634	129,007
Greece.....	35	10,423	308	2,268	5,959	5,959	18,303	18,303
Spain.....	1,827	20,073	198	12,461	203	28,748	617	26,855
United States.....		655,520		218,128		338,696		328,012
PRINCIPAL IMPORTING COUNTRIES.								
Argentina.....	32,719	145	31,106	11	34,965	29		
Australia.....	13,724	1,255	11,453	29	13,420	43		
Austria-Hungary.....	75,705	2,205					2,183	
Belgium.....	47,163	32,830			32,120	9,129	60,824	46,822
Brazil.....	36,905		25,170		37,945		34,450	
British India.....	6,171		2,497		687		3,930	
Canada.....	25,306		34,255		23,142		28,763	
Chile.....	7,110		2,703		2,533		4,313	
Cuba.....	4,123		6,831		3,187			
Denmark.....	3,236		764		6,602	24	2,575	24
Dutch East Indies.....	15,039		12,944		12,969			
Finland.....	6,027	144	1,110	23	3,124	789	3,682	67
Germany.....	233,190	50,110					49,255	511
Italy.....	31,171	35	23,266	4	33,912	42	30,134	315
Japan.....	10,073		26,142		20,038		30,686	
Netherlands.....	73,991	59,366	207	(3)	8,303	259	9,618	64
Norway.....	6,732		3,959		3,857	126	5,411	
Rumania.....	5,004	41			2,976	(3)		
Russia.....	68,429							
Serbia.....	1,162							
Switzerland.....	4,983	8	9,108		3,197		4,302	
United Kingdom.....	165,075		81,193		196,131		124,368	
Other countries.....	18,699	82	12,805	8,367	7,043	12,401	6,964	129
Total.....	900,441	950,381	290,379	277,807	450,149	510,275	417,723	540,112

¹ Four-year average.² Austria only.³ Less than 500 pounds.⁴ One-year average.⁵ Three-year average.

TURPENTINE.

TABLE 286.—*Turpentine (spirits): International trade, calendar years 1909-1920.*

"Spirits of turpentine" includes only "spirits" or "oil" of turpentine and for Russia skipidar, excludes crude turpentine, pitch, and for Russia turpentine. See "General note," Table 125.]

Country.	Average, 1909-1913.		1918		1919		1920	
	Imports.	Exports.	Imports	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORT- ING COUNTRIES.	1,000 gallons.	1,000 gallons.	1,000 gallons.	1,000 gallons.	1,000 gallons.	1,000 gallons.	1,000 gallons.	1,000 gallons.
France.....	48	2,594	3	731	82	2,078	85	3,659
Russia.....	273	2,322		713		1,380		944
Spain.....		1,156		3,717		10,672		9,458
United States.....		17,868						
PRINCIPAL IMPORT- ING COUNTRIES.								
Argentina.....	554		255		480			
Australia.....	564		600		391			
Austria-Hungary.....	2,531	53						
Belgium.....	1,932	1,144			1,086	315	1,526	1,864
Canada.....	1,175		1,209		1,139		962	
Chile.....	198		(¹)		45		267	
Germany.....	9,368	460					1,252	18
Italy.....	940	3	673	1	1,198	2	749	3
Netherlands.....	3,998	2,750	21	(¹)	971	50	947	12
New Zealand.....	178		95		67		93	
Sweden.....	134	62	(¹)	10	115	102	112	244
Switzerland.....	466	9	439		473	(¹)	550	
United Kingdom.....	7,782		960		6,642		6,752	236
Other countries.....	1,009	522	908	34	1,233	695	1,030	
Total.....	31,200	28,943	5,163	4,493	13,922	15,274	14,375	16,438

¹ Less than 500 gallons.

INDIA RUBBER.

TABLE 287.—*India rubber: International trade, calendar years 1909-1920.*

[Figures for india rubber include "india rubber," so called, and caoutchouc, caucho, jebe (Peru), hule (Mexico), borracha, massaranduba, manabeira, manicoba, sorva, and seringa (Brazil), gomelastiek (Dutch East Indies), caura, sei nambi (Venezuela). See "General note," Table 125.]

Country.	Average, 1909-1913		1915		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORTING COUNTRIES.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.
Angola.....		5,620						
Belgian Congo.....		7,755						
Bolivia.....		8,395		9,452				
Brazil.....		84,938		49,960		73,306		52,000
Ceylon.....	¹ 1,999	10,953	5,507	46,290	4,655	100,822	4,465	88,553
Dutch East Indies.....	² 1	7,679		97,312		198,929		
Ecuador.....		1,040		212		886		
French Guinea.....	241	3,937		1,563		1,504		
French Kongo.....	(³)	3,797						
Gold Coast.....		2,393		1,391		722		
Ivory Coast.....	² 10	2,740		549		163		
Kamerun.....		6,409						
Mexico.....		14,262						
Peru.....		5,030		3,828		7,126		
Senegal.....		1,087		721		121		
Singapore.....	2,867	5,843	23	18			2	87
Nigeria.....		3,054		353		802		
Negri Sembilan.....		3,995		33,945		51,175	20	47,289
Perak.....		7,313		67,691		93,140	13	85,239
Selangor.....		13,736		70,609		88,637	22	89,242
Venezuela.....		772	24	81	81	519	132	358
PRINCIPAL IMPORTING COUNTRIES.								
Austria-Hungary.....	6,696	1,619				3,351		
Belgium.....	25,891	20,749			12,389	3,441	13,151	5,519
Canada.....	2,945		18,216		19,645		26,682	(³)
France.....	32,704	21,615	36,811	4,974	67,676	21,849	60,042	23,583
Germany.....	42,004	9,844					26,918	254
Italy.....	5,381	225	16,635	642	23,211	1,050	15,000	1,284
Netherlands.....	10,322	7,172	3	11	14,001	7,793	27,298	14,954
Russia.....	19,131							
United Kingdom.....	43,141		67,298		95,584		127,332	
United States.....	100,180		325,859		535,940		566,546	
Other countries.....	8,002	27,092	22,043	11,492	42,175	16,069	11,803	15,511
Total.....	302,319	289,064	492,406	401,094	815,380	617,025	933,933	428,253

¹ Three-year average.² One year.³ Less than 500 pounds.⁴ Two-year average.

SILK.

TABLE 288.—*Production of raw silk in undermentioned countries, 1909-1920*

[Estimates of the Silk Merchants' Union, Lyon, France]

Country.	Average, 1909-1913.	1916	1917	1918	1919	1920
<i>Western Europe:</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Italy.....	8,524,000	7,963,000	6,217,000	5,942,000	4,079,000	7,330,000
France.....	992,000	485,000	452,000	539,000	406,000	551,000
Spain.....	182,000	193,000	154,000	165,000	154,000	144,000
Austria.....	720,000	187,000	188,000	188,000	165,000	.....
Hungary.....		143,000	143,000	143,000	110,000	.....
Total.....	10,424,000	8,976,000	7,154,000	6,967,000	4,916,000	8,025,000
Levant and Central Asia.....	6,186,000	2,293,000	2,293,000	2,293,000	1,764,000	1,654,000
<i>Far East:</i>						
China—						
Exports from Shanghai.....	12,576,000	10,340,000	10,067,000	10,251,000	8,598,000	6,518,500
Exports from Canton.....	5,146,000	5,346,000	5,170,000	4,134,000	5,071,000	1,210,000
Japan—						
Exports from Yokohama.....	21,898,000	20,431,000	34,050,000	31,416,000	32,138,000	24,300,000
British India—						
Exports from Bengal and Cashmere.....	128,000	254,000	232,000	242,000	220,000	110,000
Indo-China—						
Exports from Saigon, Haiphong, etc.....	131,000	7,000	11,000	11,000	11,000	.....
Total.....	40,079,000	45,378,000	49,560,000	46,054,000	46,068,000	35,138,500
Grand total.....	56,689,000	56,647,000	59,007,000	55,314,000	52,768,000	44,817,500

¹ For three years, 1911-1913.

WOOD PULP

TABLE 289.—*Wood pulp: International trade, calendar years 1909-1920.*All kinds of pulp from wood have been taken for this item, but no pulp made from other fibrous substances
See "General note," Table 125.]

Country.	Average, 1909-1913		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
<i>PRINCIPAL EXPORTING COUNTRIES.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>	<i>1,000 pounds.</i>
Austria-Hungary.....	13,366	205,364	.....	.....	.....	.....	.....	142,997
Canada.....	9,481	606,203	21,344	1,167,822	26,141	1,418,259	42,282	1,639,970
Finland.....	526	236,881	221	206,055	3	304,664	.....	424,441
Germany.....	112,660	384,709	.....	.....	.....	.....	143,027	28,573
Norway.....	² 64,911	1,437,078	191,776	1,065,837	155,973	1,123,677	.....	1,317,562
Sweden.....	9,515	1,822,023	6,521	1,589,376	25,210	1,980,778	.....	2,225,032
<i>PRINCIPAL IMPORTING COUNTRIES.</i>								
Argentina.....	52,016	.....	37,298	.....	42,856	.....	.....	.....
Belgium.....	291,254	80,647	.....	.....	121,205	3,185	252,497	31,572
Denmark.....	110,866	.....	132,932	.....	74,010	.....	149,984	.....
France.....	836,899	1,720	359,752	12	590,549	88	794,650	668
Italy.....	179,267	485	39,531	87,237	87,237	.....	157,002	269
Japan.....	79,260	.....	63,934	.....	.....	.....	194,840	.....
Portugal.....	18,662	4,144	6,502	.....	4,759	.....	.....	.....
Russia.....	56,072	52,735	.....	.....	.....	.....	.....	.....
Spain.....	92,770	.....	71,462	.....	84,830	.....	145,363	.....
Switzerland.....	21,059	13,072	35,348	4,313	29,272	20,570	20,544	27,180
United Kingdom.....	1,891,006	.....	939,337	.....	2,101,613	.....	2,446,535	112
United States.....	1,007,239	24,309	1,156,418	44,648	1,272,033	80,114	1,812,695	3,932
Other countries.....	10,134	69,137	175,059	45	99,365	178	136,372	654
Total.....	4,858,963	4,938,507	3,437,930	4,078,308	4,718,076	9,619,760	6,205,330	3,580,930

¹ Austria only.² Four year average.

LIVE STOCK, 1921.

FARM ANIMALS AND THEIR PRODUCTS.

LIVE STOCK, ALL CLASSES.

TABLE 290.—*Live stock in undermentioned countries.*

NOTE.—In order to secure comparable totals, that pre-war estimate nearest to 1913 giving statistics for each class of animal is compared with the latest estimate available giving similar data.

[Census returns are in *italics*; other figures are in roman type.]

Country.	Date.	Cattle.	Buf- faloes.	Swine.	Sheep.	Goats.	Horses.	Mules.	Asses.
		<i>Thou- sands.</i>	<i>Thou- sands.</i>	<i>Thou- sands.</i>	<i>Thou- sands.</i>	<i>Thou- sands.</i>	<i>Thou- sands.</i>	<i>Thou- sands.</i>	<i>Thou- sands.</i>
United States:									
On farms.....	Jan. 1, 1914	56,592		58,933	49,719	¹ 2,915	20,962	4,449	¹ 106
	Jan. 1, 1922	65,352		56,996	36,048	² 3,459	19,099	5,436	² 72
Not on farms.....	Apr. 15, 1910	1,879		1,288	591	115	5,185	270	17
	Jan. 1, 1920	2,112		2,688	451	105	1,706	378	15
Alaska (on farms and not on farms).....	Jan. 1, 1910	1	³ 23	(¹)	(¹)	(¹)	2	⁵ 20	(¹)
	Jan. 1, 1920	1	³ 93	1	(¹)	(¹)	1	⁵ 18	(¹)
Hawaii (on farms and not on farms).....	Apr. 15, 1910	149		31	77	5	25	9	3
	Jan. 1, 1920	142		35	44	5	21	11	2
Porto Rico (on farms and not on farms)...	Apr. 15, 1910	316		166	6	49	58	5	1
	Jan. 1, 1920	279		157	4	68	67	7	1
Virgin Islands:									
On farms.....	Nov. 1, 1917	12		5	1	2	2	2	1
Not on farms.....	do.		(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Algeria.....	Sept. —, 1913	1,108		112	8,811	3,848	216	192	272
	“ 1918	1,090		125	8,500		190	170	
Argentina.....	Dec. 31, 1914	25,867		2,901	43,225	4,325	8,391	565	260
	1920	27,721		3,199	45,707	4,763	9,253	611	284
Australia.....	Dec. 31, 1913	11,484		801	85,057	202	2,523		
	Dec. 31, 1920	13,373		754	77,900		2,414		
Austria.....	Dec. 31, 1910	9,159	1	6,432	2,428	1,257	1,803	21	53
	Apr. —, 1920	2,114		1,189	368				
Azores and Madeira Islands.....	1900	89		93	87	38	2	3	9
Bahamas.....	1913	2			12		1		
	1917	1			16		1		
Barbados.....	1913						2		
	1917						2		
Basutoland.....	1911	427			1,369		88		
Bechuanaland Pro- tectorate.....	1911	324			558		2		
	1921	426			120	238	2		6
Belgium.....	Dec. 31, 1910	1,880		1,494	185	218	317	3	8
	1921	1,515		976	126	33	222		
Bermuda.....	1911	1					1		
	1917						1		
Bolivia.....	“ 1912	734		114	1,499	468	99	45	173
Bosnia-Herzegovina ⁷	{Oct. 10} 1910	1,309	1	527	2,499	1,595	222	(4)	6
	{Nov. 10}								
Brazil.....	1912-13	30,705		18,399	10,653	10,049	7,289	3,208	
	1918	⁶ 37,500		⁸ 17,329	⁸ 7,205	⁸ 6,920	⁸ 6,065	⁸ 3,222	
British Guiana.....	1913	81	(¹)	14	18	14	1	2	6
	June 30, 1918	77	(¹)	13	21	11	1	2	5

¹ Census 1910.

² Census 1920.

³ Reindeer.

⁴ Less than 500.

⁵ Dogs used as work animals; mules less than 500.

⁶ Unofficial.

⁷ Old boundaries.

⁸ Year 1916.

LIVE STOCK, ALL CLASSES—Continued.

TABLE 290.—Live stock in undermentioned countries—Continued.

Country.	Date.	Cattle.	Buf- faloes.	Swine	Sheep.	Goats.	Horses	Mules	Asses.
		Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.
Bulgaria.....	Dec 31, 1910	1,603	415	527	8,632	1,459	478	19	117
	1920	884	150				177		
Cape Verde Islands (Portuguese).....	1914	8		14	4	30	1	1	10
	1916	9		17	6	38	1	1	17
Canada.....	June 30, 1913	6,656		3,448	2,129		2,866		
	June 30, 1921	10,206		3,905	3,676		3,814	10	
Cayman Islands.....	1913	2		1		(⁴)	(⁴)		
	1918	1		1		(⁴)	(⁴)		
Ceylon.....	1912	1,484		86	90		5		
	1919	1,599		59	68	180	4		
Chile.....	1913	2,084		134	4,567	288	489	31	39
	1919	2,163		292	4,500	460	392	51	36
China.....	1914	21,997		76,519	22,186		1,934		4,394
Columbia.....	1915	4,035		711	164		526	201	139
Costa Rica.....	1914	330		64	(⁴)	1	62	2	(⁴)
Croatia-Slavonia.....	Mar. 24, 1911	1,135		1,164	850	96	350	3	
Cuba.....	Dec 31, 1913	3,141					625	46	2
	Dec. 31, 1913	3,963					779	65	
Cyprus.....	Mar. 31, 1913	61		40	10,256	233		64	
	1921	52		17	266	169	4	51	
Czecho-Slovakia.....	Dec. 31, 1920	4,213		2,015	976	1,174	581		
Denmark.....	July 15, 1914	2,463		2,497	515	41	567		
	July 15, 1921	2,591		1,430	522	50	598		
Dominican Republic (Santo Domingo).....	May 15, 1921	647		674		706	163	65	
Dominica (British)...	1903	1			1		1		
Dutch East Indies:									
Java and Madura.....	1915	3,243	2,541				304		
	Dec. 31, 1919	3,699	2,128	66	739	2,268	296		
Other possessions.....	1915	719					835		
	Dec. 31, 1919	641	959	600	114	309	307		
Dutch West Indies:									
Curacao and de- pendencies.....	1913	3		4	12	46	1	(⁴)	1
	1918	3		3	27	70	1	(⁴)	5
Surinam or Dutch Guiana.....	1913	8		5	(⁴)	3	(⁴)	(⁴)	1
	1918	10		3	(⁴)	2		1	
Egypt ¹²	1914	601	568		816	331	40	22	632
	Sept.-Oct. 1921	596	646		986	424	34	19	623
Estonia ¹³	1920	443		261	530		165		
Falkland Islands (British).....	1913	8		(⁴)	698		1		
	1918	7			699		3		
Faroe Islands (Da- nish).....	1914	4		(⁴)	112	(⁴)	1		
	1919	4			69	(⁴)	1		
Fiji Islands (British)...	1913	49		2	3			7	
	1919	63			2	12		10	

⁴ Less than 500.⁵ Unofficial.⁷ Old boundaries.⁹ In addition there were 42,619 alpacas in 1919.¹⁰ One year of age and over.¹¹ Including incorporated South Jutland Provinces where census was taken in October, 1920.¹² In addition there were 118,414 camels in 1914, and 145,008 in 1921.¹³ Excluding the District of Petersi.¹⁴ Animals owned by Europeans.

LIVE STOCK, ALL CLASSES—Continued.

TABLE 290.—Live stock in undermentioned countries—Continued

Country.	Date.	Cattle.	Buf- faloes.	Swine.	Sheep.	Goats.	Horses.	Mules.	Asses.
		Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.
Finland.....	Sept. 1, 1920	1,573 1,812	³ 120 ² 53	418 370	1,209 1,032	13 13	361 372	.....	.....
France ¹⁵	Dec. 31, 1913	14,788	.....	7,036	16,131	1,435	3,222	188	356
	Dec. 31, 1920	12,782	.....	4,584	9,372	1,229	2,542	181	298
Alsace-Lorraine.....	Dec. 1, 1913	550	.....	493	44	74	.....	.....	.....
	Dec. 1, 1920	435	.....	358	34	112	93	2	1
French Equatorial Africa (French Congo).....	1918	400	.....	150	1,000	1,500	20	.....	.....
French establish- ments in India.....	1913	51	.....	.....	13	24	.....	.....	.....
	1918	50	.....	.....	18	25	.....	.....	.....
French Guiana.....	1916	6	(⁴)	7	(⁴)	(⁴)	(⁴)	.....	.....
French Guinea.....	1914	400	.....	.....	150	140	3	.....	.....
	⁶ 1919	420	.....	.....	102	2	3	.....	.....
French Indo-China: Annam.....	1914	215	.....	.....	.....	.....	.....	.....	.....
Cochin-China.....	1914	109	242	709	3	.....	.....	.....	.....
	⁶ 1920	.....	435	277	3	.....	12	.....	.....
Germany ¹⁵	Dec. 1, 1913	20,444	.....	25,166	5,476	3,474	3,227	.....	.....
	Dec. 1, 1921	16,840	.....	15,876	3,882	4,337	¹⁰ 3,683	27	6
Grenada (British).....	1911	5	.....	.....	.....	.....	2	.....	.....
	1918	.....	.....	2	4	5	.....	1	1
Greece.....	⁷ 1914	500	25	227	3,547	2,638	149	80	133
	1920	659	9	416	5,811	3,418	201	304	.....
Guam.....	1913	6	.....	.....	.....	.....	.....	.....	.....
Guatemala.....	1913	557	.....	188	514	11	64	33	.....
	⁶ 1920	700	.....	100	300	.....	150	.....	.....
Honduras ¹⁷	1913-14	489	.....	180	5	23	68	20	4
	1919	103	.....	23	(⁴)	(⁴)	13	3	(⁴)
Hongkong (British).....	1913	1	.....	.....	.....	.....	(⁴)	.....	.....
	1919	2	.....	.....	.....	(⁴)	(⁴)	.....	.....
Hungary.....	⁷ Apr. 30, 1913	6,045	162	6,825	6,560	269	2,005	1	16
	1920	2,148	.....	8,320	1,817	.....	718	.....	.....
Iceland.....	1913	27	.....	.....	635	1	47	.....	.....
	1919	23	.....	.....	583	2	52	.....	.....
India (British).....	1913-14	¹⁸ 124,965	¹⁸ 18,214	.....	¹⁹ 23,081	¹⁹ 30,694	¹⁹ 1,644	¹⁹ 79	¹⁹ 1,508
	Dec. to Apr., 1919-20.	117,428	28,493	.....	21,984	24,134	1,699	75	1,378
India (native States).....	1913-14	¹⁸ 12,254	¹⁸ 1,772	.....	8,326	.....	176	152	.....
	Dec. to Apr., 1919-20.	15,109	3,911	.....	8,188	4,535	277	3	175
Italy.....	Mar. 19, 1908	6,199	19	2,508	11,163	2,715	956	388	850
	Apr. 6, 1918	8,240	24	2,339	11,754	3,083	²⁰ 990	497	849
Ivory Coast (French).....	1918	53	.....	11	126	168	1	.....	(⁴)
Jamaica.....	1913	116	.....	31	10	.....	53	.....	.....
	1918	167	.....	32	12	39	.....	.....	.....
Japan.....	Dec. 31, 1913	1,389	.....	310	3	89	1,582	.....	.....
	1919	1,345	.....	470	5	125	1,480	.....	.....
Chosen (Korea).....	Dec. 31, 1913	1,211	.....	761	(⁴)	10	51	1	18
	Dec. 31, 1920	1,490	.....	977	.....	21	55	2	10

³ Reindeer.

⁴ Less than 500.

⁶ Unofficial.

⁷ Old boundaries.

¹⁵ Exclusive of Alsace-Lorraine.

¹⁶ Exclusive of army horses.

¹⁷ Enumerated from tax returns.

¹⁸ Buffalo calves included with cattle.

¹⁹ Exclusive of Bengal.

²⁰ Including 855 in transit and 180,328 belonging to the Royal army.

LIVE STOCK, ALL CLASSES—Continued.

TABLE 290.—Live stock in undermentioned countries—Continued.

Country.	Date.	Cattle.	Buf- faloes.	Swine.	Sheep	Goats.	Horses.	Mules.	Asses.
		Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.
Japan—Continued		1	21 418	1,322	(4)	129	(4)	.....	.....
Formosa (Taiwan)	Dec. 31, 1913	.....	.....	.....	.....	.....	.....	.....	.....
	Dec. 31, 1918	385	.....	1,279	99	.....	(4)	.....	.....
Karafuto (Japan- ese).....	Dec. 31, 1913	1	.....	(4)	.....	.....	2	.....	.....
	Dec. 31, 1918	1	.....	1	.....	.....	4	.....	.....
Kwantung (leased province of Japan).....	Dec. 31, 1913	31	.....	66	1	12	3	13	.....
	Dec. 31, 1917	31	.....	76	1	6	3	13	27
Kenya Colony and Protectorate (Brit- ish East Africa).....	Nov. 31, 1913	780	.....	3	6,500	.....	1	.....	.....
	June 30, 1920	2,512	.....	9	2,528	3,579	22 1	1	32
Latvia.....	1921	780	.....	482	1,332	.....	282	.....	.....
Libya (Italian).....	1910	45	.....	.....	996	686	34	(4)	39
Lithuania.....	6 1920	865	.....	1,400	730	.....	550	.....	.....
Luxembourg.....	Dec. 1, 1913	103	.....	137	5	16	19	.....	.....
	Dec. 4, 1919	89	.....	89	5	13	18	(4)	(4)
Madagascar.....	17 1915	6,151	.....	600	295	200	3	.....	.....
	6 1920	7,519	.....	437	106	116	3	(4)	.....
Malta.....	Mar. 31, 1913	4	.....	4	15	.....	9	.....	.....
	Mar. 31, 1920	4	.....	.....	19	18	.....	.....	.....
	1913	22	.....	8	1	.....	1	.....	.....
Mauritius ²²	Dec. 31, 1920	17	.....	4	1	0	1	.....	.....
Mexico.....	June 30, 1903	.....	.....	.....	.....	.....	.....	.....	.....
	6 1921	5,142	.....	616	3,424	4,208	859	334	288
		2,304	.....	1,913	24 293	24 1,254	635	133	168
Morocco:									
Eastern.....	1915-16	22	.....	.....	664	285	.....	.....	.....
Western.....	May-June, 1915-16.	85	.....	29	4,054	1,227	111	.....	251
	1921	1,300	25 86	130	6,600	2,000	65	54	420
Mozambique.....	1916	38	.....	24	10	34	.....	.....	.....
Netherlands.....	June —, 1913	2,097	.....	1,350	842	232	334	.....	.....
	Mar. —, 1921	2,063	.....	1,519	668	272	351	.....	.....
New Caledonia.....	(6)	130	.....	25	25	25	.....	.....	.....
Newfoundland (Brit- ish).....	1911	32	.....	19	75	15	18	.....	.....
New Zealand.....	Apr. —, 1911	3,020	.....	549	23,996	.....	404	(4)	.....
	1921	3,139	.....	350	23,235	17	337	(4)	.....
Norway.....	Sept. 30, 1914	1,146	.....	228	1,327	237	182	.....	.....
	26 June 20, 1918	1,038	.....	209	1,185	199	210	.....	.....
Nyasaland Protecto- rate.....	Mar. 31, 1913	63	.....	22	23	138	.....	(4)	.....
	6 1919	84	.....	21	40	149	.....	(4)	.....
Palestine.....	6 1921	.....	.....	.....	262	272	.....	26 9	.....
Panama.....	1916	200	.....	30	.....	5	15	2	.....
Papua, Territory of (British).....	1913	2	.....	(4)	(4)	.....	(4)	.....	.....
	6 1918	1	.....	.....	.....	.....	(4)	(4)	.....

⁴ Less than 500.⁶ Unofficial.¹⁷ Enumerated from tax returns.²¹ Includes zebus.²² In addition there were 103,152 camels owned by natives.²³ Animals on sugar estates only.²⁴ In addition there were 216,440 designated as sheep and goats.²⁵ Camels.²⁶ Incomplete.

LIVE STOCK, ALL CLASSES—Continued.

TABLE 290.—Live stock in undermentioned countries—Continued.

Country.	Date.	Cattle.	Buf- faloes.	Swine	Sheep.	Goats.	Horses.	Mules	Asses.
		Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.
Paraguay.....	1915 Dec. 31, 1918	5,249 2,500	.....	61 87	600 600	87 93	478 490	17 19	18 20
Peru.....	6 1921	250	.....	.....	27 10,650	.....	30	50	.....
Philippine Islands....	Dec. 31, 1913 Dec. 31, 1919	418 679	²⁸ 1,047 ²⁸ 1,358	2,087 3,130	104 168	528 732	179 255	.....	.....
Portugal.....	Oct. —, 1906 Mar. —, 1920	703 741	.....	1,111 921	3,078 3,851	1,034 1,493	88	58	144
Portuguese East Africa	6 1921	191	.....	.....	.....	.....	.....	.....	.....
Poland ²⁹	Summer, 1913 Sept. 30, 1921	2,011 7,861	(⁴)	401 5,161	683 2,063	9	1,116 3,187	(⁴)	(⁴)
Rhodesia: Southern.....	Dec. 31, 1914 Jan. 1, 1921	748 1,504	.....	14 13	324	675	.....	³⁰ 3	.....
Northern.....	1912	255	.....	.....	.....	.....	.....	.....	.....
Rumania.....	7 1911 1920	2,687 4,730	.....	1,021 2,514	5,268 8,690	187 500	825 1,455	4 12	.....
Russia (European)...	³¹ Summer, 1913.	31,974	³ 605	13,458	41,426	873	22,771	6	7
Russia (Asiatic) (33 governments of the Caucasus, central Asia, and Siberia)...	Summer, 1913	18,404	.....	2,895	38,696	4,791	11,959	.....	.....
Russia and Ukraine (Soviet).....	1921	38,132	.....	13,501	47,157	.....	23,670	.....	.....
Salvador.....	1906	251	.....	423	21	.....	74	.....	.....
St. Helena (British)...	1911	1	.....	(⁴)	4	1	(⁴)	.....	.....
St. Lucia (British)...	1914 1916	.....	.....	.....	.....	.....	1 1	.....	.....
Senegal.....	6 1919	417	.....	.....	.....	.....	.....	.....	.....
Serbia.....	Dec. 31, 1910	957	7	868	3,819	631	153	1	.....
Shetland Islands.....	1919	14	.....	(⁴)	141	.....	5	.....	.....
Seychelles Islands (British).....	1913 6 1919	1 1	.....	6	(⁴) (⁴)	..... 1	(⁴) (⁴)	.....	.....
Siam.....	Jan. 1, 1916 Mar. 31, 1920	2,337 2,621	2,120 2,508	..... 750	.....	.....	105 ²² 133	.....	.....
Somaliland (Italian)...	Feb. 1, 1920	1,245	.....	.....	1,606	.....	11	²³ 2,101	.....
Southwest Africa Protectorate (former German Southwest Africa).....	6 1914 6 1920	239 400	.....	.....	1,125 2,225	.....	17	.....	.....
Spain.....	1913 1921	2,879 3,718	.....	2,710 5,162	16,441 20,582	3,894 4,298	542 722	918 1,205	849 1,138

³ Reindeer.

⁴ Less than 500.

⁶ Unofficial.

⁷ Old boundaries.

¹⁴ Animals owned by Europeans.

²⁵ Camels.

²⁷ Includes 50,000 vicunas.

²⁸ Carabao only.

²⁹ Pre-war figures are for former Russian or Congress Poland, while the post-war figures give the number of live stock within the Polish frontier in 1921, previous to a decision being reached concerning Upper Silesia.

³⁰ Animals owned by natives only.

³¹ 51 governments, Poland excluded.

³² In addition there were 6,294 elephants.

LIVE STOCK, ALL CLASSES—Continued.

TABLE 290.—Live stock in undermentioned countries—Continued.

Country.	Date.	Cattle.	Buf- faloes.	Swine.	Sheep.	Goats.	Horses.	Mules.	Asses.
		<i>Thou- sands.</i>	<i>Thou- sands.</i>	<i>Thou- sands.</i>	<i>Thou- sands.</i>	<i>Thou- sands.</i>	<i>Thou- sands.</i>	<i>Thou- sands.</i>	<i>Thou- sands.</i>
Straits Settlements and Labuan.	1913	46	.....	153	.....	.....	2	.....	.....
	1917	55	.....	220	.....	.....	2	.....	.....
Swaziland.....	1913	73	.....	9	.....	170	1	.....	.....
	1920	230	.....	9	.....	250	1	.....	.....
Sweden.....	Dec. 31, 1913	2,721	.....	968	.....	988	71	506	.....
	June 1, 1919	2,551	.....	717	.....	1,564	133	716	.....
Switzerland.....	Apr. 31, 1911	1,433	.....	570	.....	161	341	144	8
	Apr. 21, 1921	1,425	.....	639	.....	244	329	134	4
Tanganyika Territory (former German East Africa).....	1912	3,994	.....	.....	.....	6,440	.....	.....	.....
Trinidad and Tobago.	1913	13	.....	9	.....	2	.....	5	.....
	1917	11	.....	.....	.....	4	.....	12	.....
Tunis ¹⁷	Dec. 31, 1913	217	.....	17	.....	729	505	37	23
	1920	537	.....	19	.....	2,183	285	75	30
Turkey (European and Asiatic).	1913	³⁸ 3,835	³⁴ 2,697	.....	.....	18,722	16,463	711	145
	1919	³⁸ 3,740	³⁴ 378	.....	.....	11,200	2,065	630	85
Turks and Caicos Islands (British).	1913	1	.....	(⁴)	(⁴)	.....	(⁴)	.....	.....
	1917	1	.....	(⁴)	(⁴)	.....	(⁴)	.....	.....
Upper Senegal and Niger (French).....	July 1913	1,299	.....	1	.....	2,161	2,365	63	(⁴)
Union of South Africa.	Dec. 31, 1911	5,797	.....	1,038	.....	30,657	11,763	719	94
	1920	7,655	.....	943	.....	29,305	7,640	793	95
United Kingdom.....	1913	11,937	.....	3,306	.....	27,629	³⁵ 246	1,874	³⁵ 30
	June 4, 1921	11,893	.....	3,639	.....	24,273	³⁵ 261	1,903	³⁵ 27
Uganda Protectorate.	³⁸ 1913	775	.....	.....	.....	537	.....	(⁴)	.....
	1917	665	.....	.....	.....	245	.....	(⁴)	.....
Uruguay.....	1903	8,193	.....	130	.....	26,286	30	556	18
	Apr. 20, 1916	7,803	.....	304	.....	11,473	12	555	14
Venezuela.....	1912	2,004	.....	1,618	.....	177	1,607	191	89
	1920	2,078	.....	512	.....	113	2,155	162	55
Yugoslavia.....	Jan. 31, 1921	4,834	51	3,281	.....	6,773	1,544	1,050	17
Grand totals: ³⁷									
Prewar.....		³⁸ 479,551	³⁸ 30,249	130,671	⁴⁰ 548,383	⁴⁰ 112,292	⁴² 112,930	⁴² 8,099	⁴² 7,749
Recent.....		³⁹ 492,072	³⁹ 40,267	169,167	⁴¹ 465,895	⁴¹ 84,564	⁴³ 100,524	⁴³ 9,353	⁴³ 7,745

⁴ Less than 500.¹⁷ Unofficial.¹⁸ Enumerated from tax returns.¹⁹ Excludes territories of Mesopotamia, Palestine, Syria, and Arabia.²⁴ Includes oxen.²⁵ Ireland only.²⁶ Exclusive of horned cattle and sheep in certain provinces and districts.

³⁷ Totals include figures only for countries having comparable data. In order to include in the grand totals the territories formerly belonging to Russia, the figures for Russian or Congress Poland, and Russia (European and Asiatic) for 1913 have been added in the prewar totals while the most recent estimates available for Soviet Russia (including Soviet Ukraine), Poland (1921 boundaries, including some former German and Austrian territory) and the Balkan States Estonia, Latvia, and Lithuania have been included in the post-war totals. Figures for Czechoslovakia and Yugoslavia are included in the total of recent estimates, since they were included in the prewar estimates in the countries to which they formerly belonged.

³⁸ 30,042,000 designated as "cattle and buffaloes" included with cattle.³⁹ 435,000 designated as "cattle and buffaloes" included with cattle.⁴⁰ 9,982,000 designated as "sheep and goats" included with sheep.⁴¹ 50,950,000 designated as "sheep and goats" included with sheep.⁴² 3,614,000 designated as "horses, mules, and asses" or "mules and asses" or "horses and mules" included with horses.⁴³ 3,825,000 designated as "horses, mules, and asses" or "mules and asses" or "horses and mules" included with horses.

HIDES AND SKINS.

TABLE 291.—Hides and skins: International trade, calendar years 1909-1920.

GENERAL NOTE.—Substantially the international trade of the world. It should not be expected that the world export and import totals for any year will agree. Among sources of disagreement are these: (1) Different periods of time covered in the "year" of the various countries; (2) imports received in year subsequent to year of export; (3) want of uniformity in classification of goods among countries; (4) different practices and varying degrees of failure in recording countries of origin and ultimate destination, (5) different practices of recording reexported goods; (6) opposite methods of treating free ports; (7) clerical errors, which, it may be assumed, are not infrequent.

The exports given are domestic exports, and the imports given are imports for consumption as far as it is feasible and consistent so to express the facts. While there are some inevitable omissions, on the other hand there are some duplications because of reshipments that do not appear as such in official reports. For the United Kingdom, import figures refer to imports for consumption, when available, otherwise total imports, less exports, of "foreign and colonial merchandise." Figures for the United States include Alaska, Porto Rico, and Hawaii.

Country.	Average, 1909-1913.		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORTING COUNTRIES.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.
Argentina.....	207	293,950	.....	241,381	.....	299,082	.....	.....
Brazil.....	.....	83,352	.....	104,995	.....	134,964	.....	8,782
British India.....	20,376	169,857	12,944	80,324	13,234	196,286	10,585	91,971
British South Africa.....	221	51,159	2,253	45,578	2,566	73,867	1,247	51,766
China.....	2,317	72,731	3,648	85,893	3,754	94,707	3,222	68,523
Chosen (Korea).....	64	4,944	.....	.....	.....	.....	.....	.....
Cuba.....	166	14,293	24	28,454	.....	405	.....	.....
Denmark.....	9,842	21,998	332	7,409	5,638	12,135	4,176	9,066
Dutch East Indies.....	135	16,708	222	9,360	345	32,176	.....	.....
Egypt.....	.....	10,754	176	6,386	263	8,943	293	5,064
Mexico.....	107	41,012	.....	.....	.....	.....	.....	.....
New Zealand.....	752	25,577	430	31,712	503	32,727	611	33,661
Peru.....	.....	6,195	.....	3,824	.....	7,351	.....	.....
Switzerland.....	6,659	22,866	813	21	1,519	4,324	1,944	4,102
Uruguay.....	.....	71,105	.....	152,741	.....	.....	.....	.....
Venezuela.....	.....	9,764	1	5,032	83	16,129	.....	6,810
PRINCIPAL IMPORTING COUNTRIES.	.....	.....	.....	.....	.....	.....	.....	.....
Austria-Hungary.....	37,566	79,265	.....	.....	.....	.....	5,488	.....
Belgium.....	180,930	117,213	.....	.....	30,647	11,413	40,525	17,935
Canada.....	46,820	43,469	17,640	19,069	37,543	46,060	33,772	33,501
Finland.....	10,717	7,130	117	.....	9,506	408	4,357	123
France.....	155,508	131,041	44,650	4,379	152,323	53,883	111,179	54,670
Germany.....	440,200	152,372	.....	.....	.....	.....	98,052	1,050
Greece.....	5,770	2,283	6,300	4,078	8,092	6,707	7,831	3,629
Italy.....	53,524	48,428	68,465	308	92,990	6,304	55,721	17,573
Japan.....	6,321	710	21,789	.....	22,575	.....	25,323	.....
Netherlands.....	73,691	67,636	852	1,625	31,483	48,516	40,709	42,180
Norway.....	12,979	13,852	1,165	356	11,421	5,172	5,184	6,511
Portugal.....	6,804	3,121	4,532	1,436	5,335	3,886	.....	.....
Rumania.....	7,223	2,876	.....	.....	449	55	8,783	1,272
Russia.....	110,143	96,351	5,509	1,717	.....	.....	5,044	3,948
Singapore.....	9,332	6,436	.....	.....	.....	.....	.....	.....
Spain.....	19,119	17,457	25,719	4,843	35,077	14,807	30,049	6,896
Sweden.....	25,662	24,130	5,391	40	26,648	3,586	26,260	8,774
United Kingdom.....	107,350	38,100	189,052	2,364	148,973	7,390	121,698	17,069
United States.....	514,249	25,432	361,891	5,105	744,836	24,924	510,240	17,102
Other countries.....	43,767	195,862	6,307	80,097	5,812	96,396	2,432	35,650
Total.....	1,950,521	1,991,355	763,664	921,457	1,874,188	1,234,737	1,070,609	454,424

1 Four-year average.

MEAT AND MEAT PRODUCTS.

TABLE 292.—*Meat and meat products: International trade, calendar years 1911-1920.*

[See "General Note," Table 290.]

Country.	Average 1911-1913.		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORTING COUNTRIES.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.
Argentina.....	3,457	1,173,461	346	1,950,499	295	1,590,704	.....	.....
Australia.....	1,967	507,143	1,211	370,286	1,643	521,487	.....	.....
Brazil.....	54,012	1,520	7,919	214,940	3,194	281,192	11,071	192,937
British South Africa.....	32,479	557	7,271	19,143	6,434	46,481	17,847	14,250
Canada.....	43,327	60,242	33,176	302,364	74,842	410,481	70,111	203,013
China.....	85	64,684	1,324	89,195	1,221	148,088	1,612	89,599
Denmark.....	32,184	368,188	1,274	60,816	33,482	34,177	8,170	157,661
New Zealand.....	960	326,539	1,865	272,528	1,007	552,770	1,584	593,445
Russia.....	130,897	53,175	.....	.....	.....	.....	.....	.....
United States.....	18,719	1,277,524	34,490	3,061,873	107,043	3,118,727	196,425	1,851,602
Uruguay.....	1,702	196,911	.....	850,291	.....	407,028	.....	280,410
PRINCIPAL IMPORTING COUNTRIES.	.....	.....	.....	.....	.....	.....	.....	.....
Austria-Hungary.....	49,268	12,429	.....	.....	.....	.....	179,496	7,208
Belgium.....	179,120	127,057	.....	.....	158,778	113,204	154,770	57,999
Cuba.....	128,362	(1, 2)	131,106	.....	141,095	12	.....	.....
France.....	111,496	98,281	782,104	8,025	1,283,388	72,519	601,072	80,816
Germany.....	553,752	19,525	.....	2,781	.....	.....	884,375	4,466
Italy.....	104,619	15,705	491,881	.....	625,523	5,874	174,708	8,507
Netherlands.....	359,864	497,402	1,039	41,046	170,414	218,686	161,359	292,694
Norway.....	42,416	3,365	27,654	9	90,065	7,819	64,349	1,449
Spain.....	37,974	3,200	12,607	2,905	19,021	5,555	25,328	2,776
Sweden.....	24,215	39,768	18,880	.....	129,821	15,496	62,999	24,411
Switzerland.....	60,174	8,169	28,989	2,676	47,125	6,933	49,806	5,327
United Kingdom.....	2,843,605	117,226	3,300,554	13,588	3,057,420	99,391	2,864,559	98,296
Other countries.....	170,656	57,611	131,888	71,916	101,865	33,537	68,558	31,806
All countries:	.....	.....	.....	.....	.....	.....	.....	.....
Beef.....	2,044,172	2,162,336	1,955,647	3,052,768	2,104,885	2,877,386	2,186,659	1,288,078
Mutton.....	611,744	560,284	274,008	818,807	559,334	732,032	874,331	436,703
Pork.....	1,632,382	1,638,145	2,064,985	2,490,771	2,298,400	3,150,026	1,893,352	1,891,639
Other.....	702,072	663,891	718,928	988,637	991,568	895,241	636,857	371,812
Total.....	4,990,370	5,924,656	5,013,578	6,845,983	5,954,187	7,665,485	5,591,199	4,007,762

¹ Reported only for 1911.² Less than 500 pounds.

UNITED STATES MEAT PRODUCTION, IMPORTS, EXPORTS, AND CONSUMPTION.

TABLE 293.—Meat production, imports, exports, and consumption, 1900-1921.

Production of dressed-weight meat in calendar years estimated by the Bureau of Crop Estimates for 1900, ascertained by the Bureau of the Census for 1903, estimated by the Bureau of Animal Industry for 1913-1919; edible offal estimated by the Bureau of Crop Estimates for all years from these percentages of dressed weights: Beef, 19.047 per cent; veal, 7.455 per cent; mutton, including lamb, 4.65 per cent; pork, including lard, 15.68 per cent. Some of the foreign trade numbers are approximate averages, and the small numbers of meat animals in this trade are not included. Beef statistics include veal; mutton includes lamb and goat; pork includes lard.

Class of meat.	1900	1909	1914	1917	1918	1919	1920	1921
Production, dressed weight, and edible offal, in thousand pounds.								
Beef.....	8,962,835	9,545,313	7,859,854	8,670,651	9,563,895	8,403,598	8,699,924	8,392,148
Mutton.....	616,365	613,277	663,724	513,997	526,973	639,710	567,253	655,936
Pork.....	9,286,245	9,532,453	12,268,010	9,895,689	12,571,999	12,748,350	11,814,791	12,225,737
Total....	18,865,435	19,724,073	20,791,588	18,990,637	22,662,777	21,791,658	21,031,948	21,183,821
Imports, in thousand pounds.								
Beef.....	2,500	4,500	40,125	27,639	30,296	36,991	90,492	51,666
Mutton.....	.....	.....	17,235	5,624	608	8,369	101,168	25,395
Pork.....	.....	500	1,171	2,822	2,588	9,545	5,015	2,705
Total....	2,500	5,000	53,531	36,085	31,490	107,745	196,675	79,766
Domestic exports, in thousand pounds.								
Beef.....	857,542	907,824	393,555	408,611	796,897	441,823	279,043	228,969
Mutton.....	669	1,669	5,258	2,662	1,681	2,639	3,575	7,615
Pork.....	1,602,692	1,063,223	1,469,563	1,319,128	2,293,245	2,674,395	1,569,073	1,661,558
Total....	2,460,803	1,569,651	1,870,156	1,730,601	3,091,873	3,118,727	1,851,691	1,898,042
Consumption, dressed weight, and edible offal, in thousand pounds.								
Beef.....	8,107,783	9,050,015	7,594,744	8,289,679	8,797,204	8,052,266	8,511,373	8,124,846
Mutton.....	615,785	614,677	675,701	516,759	525,950	614,910	661,826	673,815
Pork.....	7,682,583	8,522,730	10,799,818	8,489,683	10,312,150	10,083,500	10,250,723	10,560,884
Total....	16,407,151	18,224,422	18,980,263	17,296,121	19,635,394	18,780,676	19,426,922	19,365,545
Per capita consumption, in pounds.								
Beef.....	106.7	93.9	74.6	85.5	85.5	77.2	80.5	75.8
Mutton.....	8.1	7.1	6.7	5.1	5.1	6.2	6.3	6.3
Pork.....	101.1	94.2	107.3	83.2	100.2	96.7	97.0	98.6
Total....	215.9	201.2	188.6	169.5	190.9	180.1	183.8	180.8

HORSES AND MULES.

TABLE 294.—*Horses and mules: Number and value on farms in the United States, January 1, 1870–1922.*

NOTE.—Figures in *italics* are census returns; figures in *roman* are estimates of the Department of Agriculture. Estimates of numbers are obtained by applying estimated percentages of increase or decrease to the published numbers of the preceding year, except that a revised base is used for applying percentage estimates whenever new census data are available. It should also be observed that the census of 1919, giving numbers as of Apr. 15, is not strictly comparable with former censuses, which related to numbers June 1.

[In thousands—i. e., 000 omitted.]

Year.	Horses.		Mules.	
	Number.	Farm value Jan. 1.	Number.	Farm value Jan. 1.
1870, June 1.....	7,145	\$481,719	1,185	\$101,431
1880, June 1.....	10,557	560,916	1,613	112,749
1890, June 1.....	14,969	1,051,182	2,296	179,176
1900, June 1.....	18,267	797,907	3,265	167,855
1910, Apr. 15.....	19,853	2,142,524	4,810	506,049
1911.....	20,277	2,259,981	4,523	544,359
1912.....	20,509	2,172,694	4,362	525,637
1913.....	20,567	2,278,222	4,386	545,245
1914.....	20,962	2,291,638	4,449	551,017
1915.....	21,195	2,190,102	4,479	563,271
1916.....	21,159	2,149,786	4,593	522,834
1917.....	21,210	2,182,307	4,723	558,006
1918.....	21,555	2,246,970	4,873	627,679
1919.....	21,482	2,114,897	4,954	672,922
1920.....	19,786	1,907,616	5,427	805,485
1921.....	19,208	1,619,423	5,455	636,568
1922.....	19,099	1,346,154	5,436	479,806

TABLE 295.—*Horses and mules: Farm price per head, January 1, 1867–1922.*

Year.	Horses.	Mules.	Year.	Horses.	Mules.	Year.	Horses.	Mules.	Year.	Horses.	Mules.
1867....	\$59.05	\$66.94	1881....	\$58.44	\$69.79	1895....	\$36.29	\$47.55	1909....	\$95.64	\$107.84
1868....	54.27	56.01	1882....	53.53	71.35	1896....	33.07	45.29	1910....	108.03	120.20
1869....	62.57	79.23	1883....	70.59	79.49	1897....	31.51	41.66	1911....	111.46	125.92
1870....	67.42	90.16	1884....	74.64	84.22	1898....	34.26	43.88	1912....	105.94	120.51
1871....	71.14	91.98	1885....	73.70	82.38	1899....	37.40	44.96	1913....	110.77	124.31
1872....	67.41	87.14	1886....	71.27	79.60	1900....	43.68	51.41	1914....	109.32	123.85
1873....	66.39	85.15	1887....	72.15	78.91	1901....	52.86	63.97	1915....	103.33	112.36
1874....	65.15	81.35	1888....	71.82	79.78	1902....	58.61	67.61	1916....	101.60	113.83
1875....	61.10	71.89	1889....	71.59	79.49	1903....	62.25	72.49	1917....	102.89	118.15
1876....	57.29	66.46	1890....	70.22	78.04	1904....	67.93	78.88	1918....	104.24	128.81
1877....	55.83	64.07	1891....	67.00	77.88	1905....	70.37	87.18	1919....	98.45	135.83
1878....	50.63	62.03	1892....	65.01	75.55	1906....	80.72	98.31	1920....	96.51	148.42
1879....	52.36	56.00	1893....	61.22	70.68	1907....	93.51	112.16	1921....	84.31	116.69
1880....	54.16	62.19	1894....	47.83	62.17	1908....	93.41	107.75	1922....	70.48	88.26

HORSES AND MULES—Continued.

TABLE 296.—Horses and mules: Number and value on farms, January 1, 1921 and 1922, by States.

State.	Horses.						Mules.					
	Number (thousands)		Average price per head		Farm value (thousands of dollars)		Number (thousands)		Average price per head		Farm value (thousands of dollars)	
	Jan. 1—	Jan. 1—	Jan. 1—	Jan. 1—	Jan. 1—	Jan. 1—	Jan. 1—	Jan. 1—	Jan. 1—	Jan. 1—	Jan. 1—	Jan. 1—
	1921	1922	1921	1922	1921	1922	1921	1922	1921	1922	1921	1922
Maine.....	93	92	\$147.00	\$125.00	\$13,671	\$11,500	.....	.....	.....	.....	.....	.....
New Hampshire.....	37	36	132.00	114.00	4,884	4,104	.....	.....	.....	.....	.....	.....
Vermont.....	77	77	124.00	110.00	9,548	8,470	.....	.....	.....	.....	.....	.....
Massachusetts.....	49	48	151.00	135.00	7,399	6,480	.....	.....	.....	.....	.....	.....
Rhode Island.....	6	6	148.00	138.00	888	828	.....	.....	.....	.....	.....	.....
Connecticut.....	37	37	148.00	135.00	5,476	4,995	.....	.....	.....	.....	.....	.....
New York.....	525	520	129.00	117.00	67,725	60,840	7	7	\$137.00	\$133.00	\$959	\$931
New Jersey.....	72	72	144.00	133.00	10,368	9,576	6	6	161.00	151.00	966	906
Pennsylvania.....	496	496	121.00	112.00	60,016	55,552	54	53	141.00	124.00	7,614	6,572
Delaware.....	27	26	81.00	66.00	2,187	1,716	9	9	112.00	88.00	1,008	792
Maryland.....	138	137	98.00	87.00	13,524	11,919	33	33	125.00	115.00	4,125	3,795
Virginia.....	305	300	101.00	84.00	30,906	25,200	97	96	129.00	105.00	12,513	10,080
West Virginia.....	164	161	103.00	89.00	16,892	14,329	15	15	116.00	97.00	1,740	1,455
North Carolina.....	166	166	125.00	108.00	20,750	17,928	260	257	156.00	120.00	40,560	33,153
South Carolina.....	77	76	134.00	88.00	10,318	6,688	220	218	188.00	129.00	41,360	28,122
Georgia.....	101	101	112.00	76.00	11,312	7,676	406	394	153.00	99.00	62,118	39,006
Florida.....	38	38	123.00	115.00	4,674	4,370	42	42	167.00	148.00	7,014	6,216
Ohio.....	795	787	108.00	99.00	85,860	77,913	32	31	112.00	100.00	3,584	3,100
Indiana.....	704	704	95.00	81.00	66,785	56,913	101	101	109.00	84.00	11,009	8,484
Illinois.....	1,232	1,207	85.00	69.00	104,720	83,283	166	161	97.00	75.00	16,102	12,075
Michigan.....	660	594	97.00	64.00	58,200	55,836	6	6	101.00	98.00	606	588
Wisconsin.....	663	656	108.00	93.00	71,604	61,008	4	4	103.00	98.00	412	392
Minnesota.....	914	905	86.00	76.00	78,604	68,780	10	10	93.00	79.00	930	790
Iowa.....	1,318	1,278	85.00	73.00	112,030	93,294	81	79	101.00	78.00	8,181	6,162
Missouri.....	897	879	73.00	52.00	65,481	45,708	377	377	94.00	65.00	35,438	24,505
North Dakota.....	836	813	63.00	55.00	52,290	44,715	8	8	82.00	72.00	650	576
South Dakota.....	784	784	62.00	49.00	48,603	38,416	14	14	81.00	70.00	1,134	980
Nebraska.....	923	932	71.00	56.00	65,533	52,192	106	106	89.00	70.00	9,434	7,420
Kansas.....	1,040	1,040	66.00	48.00	68,640	49,920	279	282	88.00	59.00	24,552	16,638
Kentucky.....	374	374	87.00	68.00	32,538	25,432	293	293	111.00	82.00	32,323	24,026
Tennessee.....	312	315	93.00	75.00	29,016	23,625	349	346	110.00	86.00	38,390	29,756
Alabama.....	130	130	90.00	76.00	11,700	9,880	302	299	113.00	91.00	34,126	28,105
Mississippi.....	211	211	88.00	70.00	18,568	14,770	299	296	121.00	92.00	36,179	27,232
Louisiana.....	175	173	85.00	77.00	14,875	13,321	180	178	143.00	118.00	25,740	21,004
Texas.....	981	991	77.00	58.00	75,537	57,478	854	863	110.00	85.00	93,940	73,355
Oklahoma.....	694	708	63.00	45.00	43,722	31,860	334	337	89.00	65.00	29,728	21,905
Arkansas.....	245	247	76.00	57.00	18,620	14,079	325	328	107.00	79.00	34,775	25,912
Montana.....	669	682	50.00	41.00	33,450	27,962	9	9	87.00	69.00	788	621
Wyoming.....	182	191	46.00	39.00	8,372	7,449	3	3	77.00	61.00	231	183
Colorado.....	417	421	62.00	54.00	25,854	22,734	32	32	90.00	69.00	2,880	2,208
New Mexico.....	177	177	59.00	50.00	10,443	8,850	21	21	88.00	72.00	1,848	1,512
Arizona.....	136	135	88.00	68.00	11,968	9,180	12	12	131.00	89.00	1,572	1,068
Utah.....	127	128	78.00	70.00	9,906	8,960	3	3	72.00	66.00	216	198
Nevada.....	48	48	58.00	47.00	2,784	2,256	2	2	66.00	53.00	132	106
Idaho.....	284	281	70.00	63.00	19,880	17,703	8	8	81.00	73.00	648	584
Washington.....	287	281	82.00	70.00	23,534	19,670	22	22	97.00	88.00	2,134	1,936
Oregon.....	269	272	83.00	76.00	22,327	20,672	14	14	95.00	81.00	1,330	1,134
California.....	382	367	98.00	82.00	37,436	30,094	60	61	123.00	102.00	7,380	6,222
United States..	19,208	19,099	84.31	70.48	1,619,423	1,346,154	5,455	5,436	116.69	88.26	636,568	479,806

HORSES AND MULES—Continued.

TABLE 297.—Wholesale price of horses and mules at St. Louis and Chicago, 1921-1902.

Year and month.	St. Louis.				Average price per head for horses on the Chicago market 1902-1921.					
	Horses, good to choice draft.		Mules, 16 to 16½ hands.		Drafters, heavy.	Carriage teams.	Drafters, plain to medium.	Wagon horses.	Farm chunks.	Southern chunks.
	Low.	High.	Low.	High.						
1921.										
January.....	\$125 00	\$215 00	\$125 00	\$230 00	\$205 00		\$150 00	\$135 00	\$92 00	.....
February.....	125 00	225 00	125 00	230 00	207 00		155 00	141 00	114 00	.....
March.....	125 00	215 00	125 00	275 00	205 00		122 00	155 00	119 00	.....
April.....	125 00	220 00	130 00	275 00	212 00		135 00	169 00	133 00	.....
May.....	175 00	250 00	130 00	275 00	203 00		121 00	163 00	130 00	.....
June.....	155 00	190 00	130 00	275 00			128 00			.....
July.....	155 00	185 00	130 00	275 00	200 00		127 00	150 00	105 00	.....
August.....	155 00	185 00	130 00	250 00	188 00		128 00	150 00	105 00	.....
September.....	125 00	185 00	130 00	230 00	188 00		128 00	150 00	105 00	.....
October.....	125 00	160 00	155 00	250 00	181 00		128 00	160 00	105 00	.....
November.....	140 00	200 00	150 00	210 00	200 00		142 00	155 00	118 00	.....
December.....	140 00	160 00	150 00	230 00	202 00		132 00	162 00	120 00	.....
	125 00	225 00	125 00	230 00	200 00		127 00	153 00	114 00	.....
1920.....	110 00	275 00	140 00	400 00	242 00	\$167 00	154 00	154 00	104 00	\$58 00
1919.....	110 00	325 00	150 00	400 00	230 00	167 00		116 00	121 00	73 00
1918.....	190 00	212 00	201 00	307 00	220 00					
1917.....	165 00	245 00	172 00	272 00	212 00	470 00	162 00	148 00	170 00	63 00
1916.....	150 00	235 00	135 00	275 00	252 00		166 00	156 00	167 00	109 00
1915.....	180 00	225 00	120 00	275 00	205 00	473 00	164 00	150 00	130 00	88 00
1914.....	175 00	220 00	120 00	250 00	208 00	452 00	160 00	160 00	171 00	93 00
1913.....	200 00	250 00	160 00	280 00	213 00	493 00	174 00	165 00	176 00	98 00
1912.....	165 00	240 00	160 00	265 00	210 00	473 00	177 00	160 00	175 00	97 00
1911.....	165 00	235 00	150 00	275 00	205 00	453 00	182 00	155 00	170 00	92 00
1910.....	165 00	240 00	150 00	275 00	200 00	173 00	172 00	111 00	161 00	87 00
1909.....	140 00	225 00	130 00	235 00	194 00	482 00	165 00	137 00	152 00	77 00
1908.....	175 00	250 00	125 00	200 00	180 00	450 00	156 00	129 00	138 00	69 00
1907.....	175 00	225 00	125 00	250 00	194 00	482 00	165 00	137 00	152 00	77 00
1906.....	175 00	225 00	125 00	215 00	188 00	486 00	158 00	151 00	147 00	72 00
1905.....	175 00	225 00	120 00	210 00	188 00	485 00	156 00	132 00	145 00	70 00
1904.....	175 00	200 00	135 00	200 00	177 00	475 00	150 00	140 00	140 00	64 00
1903.....	150 00	185 00	120 00	175 00	171 00	455 00	150 00	122 00	140 00	62 00
1902.....	160 00	185 00	120 00	160 00	160 00	450 00	145 00	117 00	153 00	57 00

¹ Expresses, 1902-1919.² Drivers, 1902-1919.³ General, 1902-1919.⁴ Bussers and trimmers, 1902-1919.

TABLE 298.—Horses: Farm price per head, 15th of each month, 1910-1921.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1910.....	\$140	\$147	\$150	\$154	\$148	\$151	\$148	\$148	\$145	\$144	\$143	\$141
1911.....	143	144	145	147	146	145	139	141	139	137	136	134
1912.....	134	137	140	142	144	145	142	142	141	140	139	133
1913.....	140	146	146	148	145	146	145	141	141	138	136	135
1914.....	137	139	138	138	139	133	137	135	132	131	130	130
1915.....	130	132	132	132	133	132	134	131	131	129	127	126
1916.....	128	129	131	133	134	132	133	131	131	130	129	129
1917.....	129	131	133	136	138	137	135	132	132	130	129	129
1918.....	130	133	137	137	136	135	132	131	128	126	122	121
1919.....	120	121	124	127	129	127	127	125	119	114	113	113
1920.....	118	123	127	131	132	130	127	124	119	112	103	97
1921.....	96	98	101	100	98	98	94	93	89	85	82	81

HORSES AND MULES—Continued.

TABLE 299.—Horses and mules: Yearly receipts at principal markets, and at all markets, 1900 to 1921.

[In thousands—i. e., 000 omitted.]

Year.	Receipts at principal and other markets. ¹										Total all markets. ²
	Chicago.	Kansas City.	Omaha.	St. Paul.	East St. Louis.	Fort Worth.	Denver.	Stony City.	St. Joseph.	Total.	
1900.....	90	103	60	27	145	(3)	23	31	15	501	.....
1901.....	109	97	36	15	129	(3)	17	18	23	444	.....
1902.....	102	77	42	8	109	6	21	19	26	461	.....
1903.....	151	67	53	8	129	10	19	13	25	419	.....
1904.....	106	68	47	6	181	18	13	4	29	473	.....
1905.....	127	66	45	6	178	18	18	1	22	503	.....
1906.....	127	70	42	9	166	21	17	19	22	499	.....
1907.....	102	62	44	15	117	19	11	16	27	413	.....
1908.....	92	56	40	7	109	12	11	13	23	363	.....
1909.....	91	68	32	6	112	21	15	15	23	383	.....
1910.....	83	70	30	5	130	34	16	16	28	412	.....
1911.....	105	85	32	8	171	37	18	17	42	515	.....
1912.....	93	73	33	5	164	49	15	19	36	481	.....
1913.....	91	82	32	5	157	57	16	10	32	482	.....
1914.....	106	87	31	6	148	48	17	10	25	478	.....
1915.....	155	102	42	10	271	55	72	22	41	780	327 1,107
1916.....	205	123	27	12	267	79	53	17	27	819	668 1,478
1917.....	107	128	33	10	280	115	20	29	34	756	720 1,476
1918.....	88	85	22	7	242	79	15	23	39	600	616 1,216
1919.....	46	83	25	11	250	60	23	16	43	557	510 1,067
1920.....	43	72	19	10	141	45	18	23	30	461	324 785
1921.....	34	30	7	5	68	13	10	7	12	186	131 317
1921.											
January.....	4	3	(4)	(4)	8	3	1	1		21	14 35
February.....	4	3	1	1	10	1	1	2	2	25	16 41
March.....	6	4	1	1	8	1	1	1	1	25	19 44
April.....	4	2	1	(4)	4	(4)	-	1	1	14	11 25
May.....	3	2	(4)	(4)	4	(4)	(4)	(4)	(4)	10	8 18
June.....	2	1	(4)	(4)	2	(4)	1	(4)	(4)	7	7 14
July.....	1	1	(4)	(4)	2	(4)	(4)	(4)	(4)	6	5 11
August.....	1	1	1	(4)	5	(4)	1	(4)	1	10	7 17
September.....	2	2	1	(4)	6	1	1	1	1	15	7 22
October.....	2	4	(4)	(4)	8	3	1	1	2	22	14 36
November.....	2	4	1	(4)	6	2	1	(4)	1	17	12 29
December.....	3	3	(4)	(4)	5	2	(4)	(4)	1	14	11 25

¹ Prior to 1915 receipts compiled from yearbooks of stockyard companies.² Figures prior to 1915 not available.³ Not in operation.⁴ Less than 500.

HORSES AND MULES—Continued.

TABLE 300.—Horses and mules: Yearly receipts at public stockyards, 1916-1921.

[In thousands—i e., 000 omitted.]

Stockyards.	1916	1917	1918	1919	1920	1921
Albany, N. Y.	6	3				
Amarillo, Tex.	14	13	15	15	13	2
Atlanta, Ga.			78	60	26	3
Augusta, Ga.		23	33	22	7	1
Baltimore, Md.	14	7	9	5	4	2
Billings, Mont.	(¹)	1	1	2	1	(¹)
Boston, Mass.	8	1	(¹)	(¹)		
Buffalo, N. Y.	56	17	10	19	22	24
Cheyenne, Wyo.	6	4	4	2	2	1
Chicago, Ill.	205	107	88	46	43	31
Cincinnati, Ohio.	20	27	19	19	14	6
Cleveland, Ohio.		9	4	5	6	2
Columbia, S. C.	1	1	1	1	1	(¹)
Columbus, Ohio.	(¹)	(¹)	2		(¹)	
Dayton, Ohio.	(¹)	(¹)	(¹)	(¹)		
Denver, Colo.	53	20	15	23	18	10
Detroit, Mich.		14	4	2	3	1
Dublin, Ga.		(¹)	(¹)	(¹)	(¹)	
East St. Louis, Ill.	267	280	242	250	141	68
El Paso, Tex.	23	15	9	16	14	9
Erie, Pa.			2	1	2	
Evansville, Ind.	1	1	1	1	1	(¹)
Fort Worth, Tex.	79	115	79	60	45	13
Indianapolis, Ind.	29	62	20	9	9	3
Jacksonville, Fla.	1	(¹)		(¹)	(¹)	
Jersey City, N. J.	155	70	42	11	3	2
Kansas City, Mo.	123	128	85	83	72	30
Knoxville, Tenn.	7	8	6	7	4	2
Lancaster, Pa.	1	8	11	2	3	1
Logansport, Ind.	1				(¹)	(¹)
Louisville, Ky.	5	14	17	11	9	1
Marion, Ohio.			(¹)	1	2	1
Memphis, Tenn.	40	61	33	33	8	15
Milwaukee, Wis.	2	2	2	2	2	1
Montgomery, Ala.		7	24	22	12	4
Nashville, Tenn.	16	74	104	98	30	
Nebraska City, Nebr.			(¹)	(¹)	(¹)	(¹)
New Brighton, Minn.	1	1	1	10	4	(¹)
New Orleans, La.	1	3	1	(¹)	1	(¹)
New York, N. Y.	9	8	(¹)	2	2	1
Ogden, Utah.		25	19	7	6	1
Oklahoma, Okla.	47	62	13	10	6	2
Omaha, Nebr.	27	33	22	25	19	7
Pasco, Wash.			(¹)	(¹)	(¹)	(¹)
Peoria, Ill.	1	1	(¹)	(¹)	(¹)	(¹)
Philadelphia, Pa.	11	10	8	7	6	3
Pittsburgh, Pa.	54	39	35	18	20	11
Portland, Oreg.	3	7	2	2	2	1
Pueblo, Colo.	8	7	4	4	4	1
Richmond, Va.	18	25	24	25	16	10
St. Joseph, Mo.	27	34	39	43	30	12
St. Louis, Mo.	2	2	1			
St. Paul, Minn.	12	10	7	11	10	5
Salt Lake City, Utah.	2	2	2	2	2	1
San Antonio, Tex.	41	32	30	30	25	6
Seattle, Wash.	(¹)		(¹)	1	1	(¹)
Sioux City, Iowa.	17	29	23	16	23	7
Sioux Falls, S. Dak.		(¹)	(¹)	(¹)	(¹)	(¹)
Spokane, Wash.	7	7	5	3	2	1
Tacoma, Wash.	(¹)		(¹)	(¹)		
Toledo, Ohio.	1	2	2	3	4	1
Washington, D. C.	(¹)	2	(¹)	(¹)	(¹)	(¹)
Watertown, Mass.	45	22	7	2		
Wichita, Kans.	17	19	11	17	25	11
Total.	1,478	1,476	1,216	1,067	725	317

¹ Less than 500.

HORSES AND MULES—Continued.

TABLE 301.—*Horses and mules: Monthly and yearly receipts at all public stock-yards, 1915-1921.*

[In thousands—i. e., 000 omitted.]

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1915.....	97	95	95	88	98	103	94	74	85	110	97	70	1,107
1916.....	118	105	111	84	120	104	162	138	139	133	129	115	1,478
1917.....	143	95	117	93	68	65	83	58	129	236	223	163	1,476
1918.....	161	149	133	44	36	45	54	84	123	132	145	76	1,216
1919.....	115	87	71	53	37	43	53	92	148	139	146	93	1,068
1920.....	146	112	87	48	43	34	38	75	62	40	23	17	725
1921.....	35	41	44	25	18	14	11	17	22	36	29	25	317

TABLE 302.—*Horses and mules: Imports, exports, and prices, 1896-1921.*

Year ending June 30—	Imports of horses.			Exports of horses.			Exports of mules.		
	Number.	Value.	Average import price.	Number.	Value.	Average export price.	Number.	Value.	Average export price.
1896.....	9,991	\$662,591	\$66.32	25,126	\$3,530,703	\$140.52	5,918	\$406,161	\$68.63
1897.....	6,998	464,808	66.42	39,532	4,769,265	120.64	7,473	545,331	72.97
1898.....	3,085	414,899	134.49	51,150	6,176,569	120.75	8,098	664,789	82.09
1899.....	3,042	551,050	181.15	45,778	5,444,342	118.93	6,755	516,908	76.52
1900.....	3,102	596,592	192.32	64,722	7,612,616	117.62	43,369	3,919,478	90.88
1901.....	3,785	985,738	260.43	82,250	8,873,845	107.89	34,405	3,210,267	93.30
1902.....	4,832	1,577,234	326.41	103,020	10,048,046	97.53	27,586	2,692,298	97.61
1903.....	4,999	1,536,296	307.32	34,007	3,152,159	92.69	4,294	521,725	121.47
1904.....	4,726	1,460,287	308.99	42,001	3,189,100	75.93	3,658	412,971	112.90
1905.....	5,180	1,591,083	307.16	34,822	3,175,239	91.19	5,826	645,464	110.79
1906.....	6,021	1,716,675	285.11	40,087	4,365,981	108.91	7,167	939,639	138.08
1907.....	6,080	1,978,105	325.35	33,882	4,359,957	131.99	6,781	850,901	125.48
1908.....	5,487	1,604,392	292.40	19,000	2,612,587	137.50	6,609	990,667	149.90
1909.....	7,084	2,007,276	283.35	21,616	3,386,617	156.67	3,422	472,017	137.53
1910.....	11,620	3,296,022	283.65	28,910	4,081,137	141.17	4,512	614,094	136.18
1911.....	9,593	2,692,074	280.63	25,145	3,845,253	152.92	6,585	1,070,051	162.50
1912.....	6,607	1,923,025	291.06	34,828	4,764,815	136.81	4,901	732,095	149.30
1913.....	10,008	2,125,875	212.42	28,707	3,960,102	137.95	4,744	733,795	154.68
1914.....	33,019	2,605,029	78.89	22,776	3,388,819	148.79	4,883	690,974	141.51
1915.....	12,652	977,380	77.25	289,340	64,046,534	221.35	65,788	12,726,143	193.44
1916.....	15,556	1,618,245	104.03	357,553	73,531,146	205.65	111,915	22,946,312	205.03
1917.....	12,584	1,888,303	150.06	278,674	59,528,329	213.60	136,689	27,300,854	203.39
1918.....	5,111	1,187,443	232.33	84,765	14,923,663	176.06	28,879	4,885,406	169.17
1919.....	4,003	750,264	187.43	27,975	5,206,251	186.10	12,452	2,333,929	187.43
1920.....	4,006	799,012	162.86	18,952	3,285,066	173.34	8,991	1,815,888	201.97
1921.....	4,044	1,205,457	298.09	12,638	1,923,041	152.16	6,770	1,063,254	157.05

CATTLE.

TABLE 303.—Cattle (live): Imports, exports, and prices, 1896-1921.

Year ending June 30—	Imports.			Exports		
	Number	Value.	Average import price.	Number.	Value.	Average export price.
1896.....	217,825	31,509,855	\$3.93	372,461	\$31,530,672	\$32.79
1897.....	228,977	2,589,857	7.87	392,190	36,337,431	92.70
1898.....	291,589	2,913,223	9.99	439,255	37,827,500	86.12
1899.....	199,752	2,320,262	11.62	359,490	30,316,833	78.35
1900.....	181,006	2,257,694	12.47	367,286	30,635,153	77.11
1901.....	146,022	1,331,433	13.23	459,218	37,566,980	81.81
1902.....	90,027	1,668,722	16.75	392,884	29,902,212	76.11
1903.....	69,175	1,161,548	17.55	402,178	29,848,936	74.22
1904.....	16,056	310,737	19.35	593,400	42,256,291	71.21
1905.....	27,855	458,572	16.46	367,806	40,598,048	71.50
1906.....	29,019	548,480	18.90	534,239	42,081,170	72.03
1907.....	32,402	565,122	17.44	423,051	34,577,392	81.73
1908.....	92,356	1,507,310	16.32	349,210	29,329,134	81.02
1909.....	133,184	1,999,422	14.37	207,542	18,046,976	86.96
1910.....	135,938	2,099,824	15.37	139,480	12,200,154	87.50
1911.....	132,922	2,953,077	16.14	150,100	13,133,920	87.79
1912.....	318,372	4,805,574	15.09	105,505	8,870,075	84.07
1913.....	421,649	6,640,668	15.75	24,714	1,177,199	47.63
1914.....	868,368	18,696,718	21.53	18,376	647,288	35.22
1915.....	537,167	17,513,175	32.54	5,483	702,817	124.16
1916.....	450,185	13,187,593	34.56	21,656	2,383,765	110.02
1917.....	374,825	13,021,256	34.74	13,387	919,563	70.93
1918.....	292,719	17,532,176	60.78	18,213	1,247,800	68.51
1919.....	440,369	36,835,921	84.01	42,245	2,092,816	49.42
1920.....	573,328	45,081,179	78.36	83,039	11,921,518	143.57
1921.....	329,074	23,634,361	71.62	145,673	10,950,507	75.17

TABLE 304.—Cattle: Number and value on farms in the United States January 1, 1870-1922.

NOTE.—Figures in *italics* are census returns; figures in roman are estimates of the Department of Agriculture. Estimates of numbers are obtained by applying estimated percentages of increase or decrease to the published numbers of the preceding year, except that a revised base is used for applying percentage estimates whenever new census data are available. It should also be observed that the census of 1910, giving numbers as of Apr. 15, is not strictly comparable with former censuses, which related to numbers June 1.

[In thousands—000 omitted.]

Year.	Milk cows.		Other cattle.	
	Number.	Farm value Jan. 1.	Number.	Farm value Jan. 1.
1870, June 1.....	8,955	290,577	14,835	277,647
1880, June 1.....	12,449	288,785	25,482	388,990
1890, June 1.....	16,512	369,352	34,852	544,601
1900, June 1.....	17,156	535,091	50,584	1,251,080
1910, Apr. 15.....	20,625	727,802	41,178	785,261
1911.....	20,823	632,200	39,079	815,184
1912.....	20,669	815,414	37,260	790,034
1913.....	20,497	922,783	36,080	919,045
1914.....	20,737	1,118,487	35,555	1,116,333
1915.....	21,262	1,176,338	37,067	1,237,376
1916.....	22,108	1,191,155	39,812	1,324,028
1917.....	22,894	1,365,251	41,689	1,497,021
1918.....	23,310	1,644,231	44,112	1,803,482
1919.....	23,475	1,835,770	45,088	1,993,442
1920.....	23,722	2,036,750	43,398	1,875,043
1921.....	23,594	1,515,249	41,993	1,310,727
1922.....	24,028	1,224,767	41,324	982,666

CATTLE—Continued.

TABLE 305.—*Cattle: Farm price per head, January 1, 1867-1922.*

Year.	Milk cows.	Other cattle.	Year.	Milk cows.	Other cattle.	Year.	Milk cows.	Other cattle.	Year.	Milk cows.	Other cattle.
1867.....	\$28.74	\$45.79	1881.....	\$23.95	\$17.53	1905.....	\$21.67	\$12.66	1919.....	\$52.36	\$17.49
1868.....	26.54	15.06	1882.....	25.89	19.89	1906.....	22.55	15.86	1920.....	55.29	19.07
1869.....	29.15	18.73	1883.....	30.21	21.81	1907.....	23.16	16.45	1921.....	53.97	20.54
1870.....	32.52	18.67	1884.....	31.37	23.52	1908.....	27.45	29.99	1922.....	59.39	21.20
1871.....	33.89	20.78	1885.....	20.70	23.25	1909.....	29.66	22.79	1913.....	45.02	20.36
1872.....	29.45	18.12	1886.....	27.40	21.17	1910.....	31.23	24.73	1914.....	50.94	31.13
1873.....	26.72	18.06	1887.....	26.08	19.79	1911.....	30.09	19.98	1915.....	55.33	33.98
1874.....	25.03	17.55	1888.....	24.65	17.79	1912.....	29.23	18.70	1916.....	53.92	33.55
1875.....	25.74	16.91	1889.....	23.94	17.05	1913.....	30.21	13.45	1917.....	55.65	35.88
1876.....	25.61	17.06	1890.....	22.01	15.63	1914.....	29.21	16.82	1918.....	70.54	40.68
1877.....	25.47	15.99	1891.....	21.62	14.76	1915.....	27.44	15.15	1919.....	78.20	44.22
1878.....	25.74	16.72	1892.....	21.40	15.16	1916.....	29.44	15.85	1920.....	85.85	43.21
1879.....	21.71	15.38	1893.....	21.75	15.24	1917.....	31.60	17.10	1921.....	64.22	31.36
1880.....	23.05	16.57	1894.....	21.77	14.65	1918.....	30.67	18.89	1922.....	50.97	23.78

TABLE 306.—*Cattle: Number and value on farms January 1, 1911 and 1922, by States.*

State.	Milk cows.						Other cattle.					
	Number (thousands) Jan. 1—		Average price per head Jan. 1—		Farm value (thousands of dollars) Jan. 1—		Number (thousands) Jan. 1—		Average price per head Jan. 1—		Farm value (thousands of dollars) Jan. 1—	
	1921	1922	1921	1922	1921	1922	1921	1922	1921	1922	1921	1922
Maine.....	215	212	\$60.00	\$58.00	\$12,900	\$10,176	70	71	\$25.60	\$20.20	\$1,792	\$1,434
New Hampshire.....	120	121	74.00	61.00	8,880	7,260	42	41	51.00	42.50	1,908	981
Vermont.....	363	363	63.00	55.00	23,505	19,965	84	82	21.00	16.80	1,798	1,411
Massachusetts.....	177	180	94.00	79.00	16,638	14,220	40	42	81.00	25.20	1,306	1,184
Rhode Island.....	26	26	100.00	79.00	2,600	2,054	7	7	35.00	31.30	246	218
Connecticut.....	135	138	90.00	74.00	12,150	10,212	38	39	37.00	29.70	1,421	1,158
New York.....	1,695	1,695	73.00	67.00	123,735	113,565	410	402	29.50	21.70	12,035	9,929
New Jersey.....	148	151	110.00	88.00	16,280	12,986	30	31	47.70	37.60	1,431	1,165
Pennsylvania.....	1,050	1,071	77.00	60.00	80,850	64,260	481	491	37.70	29.00	18,134	14,239
Delaware.....	38	39	81.00	57.00	3,078	2,223	9	9	34.90	26.90	350	242
Maryland.....	188	192	70.00	63.00	13,852	12,096	93	96	46.00	33.20	4,370	3,254
Virginia.....	422	426	59.00	43.00	24,898	18,318	487	448	35.60	24.70	17,337	11,666
West Virginia.....	210	210	66.00	49.50	13,860	10,692	369	354	41.70	28.60	15,387	10,124
North Carolina.....	361	365	58.00	42.00	20,938	15,330	285	274	24.20	17.30	6,897	4,740
South Carolina.....	229	236	58.00	40.00	13,282	9,440	201	201	20.30	13.80	4,080	2,774
Georgia.....	459	509	45.00	29.00	22,005	14,761	666	686	19.60	10.90	13,054	7,477
Florida.....	90	93	74.00	57.50	6,660	5,462	766	774	21.70	16.10	16,622	12,461
Ohio.....	1,038	1,048	71.50	56.00	74,217	58,688	816	832	39.40	29.70	31,334	24,710
Indiana.....	720	727	65.00	53.00	46,800	38,531	778	778	38.70	30.00	30,109	23,340
Illinois.....	1,114	1,125	63.00	52.00	70,182	58,500	1,492	1,477	36.80	29.80	54,906	43,276
Michigan.....	948	987	70.00	53.00	66,360	51,251	888	876	29.00	21.80	17,462	12,557
Wisconsin.....	2,180	2,202	65.00	52.00	141,700	114,501	880	889	25.90	10.60	22,792	17,421
Minnesota.....	1,532	1,578	58.00	48.00	88,856	75,744	1,429	1,343	23.20	18.00	33,153	24,174
Iowa.....	1,072	1,093	62.00	53.00	66,464	57,929	3,231	3,131	21.80	29.60	111,170	92,766
Missouri.....	761	789	57.50	44.00	43,758	33,836	1,890	1,890	34.20	26.60	64,638	50,085
North Dakota.....	461	479	55.00	43.00	25,355	20,597	848	831	25.20	18.50	21,370	15,374
South Dakota.....	390	417	56.00	47.00	21,840	19,509	1,748	1,691	29.80	24.20	52,090	38,744
Nebraska.....	501	516	62.00	53.00	31,563	27,348	2,452	2,427	33.10	27.40	81,161	66,500
Kansas.....	695	709	62.00	46.00	43,090	32,614	2,317	2,224	31.50	24.50	72,986	54,488
Kentucky.....	525	520	57.00	40.00	29,925	20,800	549	511	28.40	20.00	15,592	10,220
Tennessee.....	490	495	49.00	35.00	24,010	17,325	684	597	20.60	15.20	13,060	9,074
Alabama.....	496	506	40.00	29.00	19,840	14,674	536	515	13.10	10.00	7,022	5,150
Mississippi.....	536	541	47.00	30.00	24,910	16,280	684	677	14.10	10.80	9,644	7,312
Louisiana.....	220	220	52.00	43.00	11,440	9,460	586	561	23.70	15.20	13,885	8,983
Texas.....	1,042	1,073	63.00	43.00	65,646	46,139	5,310	5,363	31.20	19.60	165,672	106,724
Oklahoma.....	549	560	52.00	39.00	28,548	21,840	1,393	1,421	24.40	17.50	33,989	24,865
Arkansas.....	501	516	43.00	29.00	21,543	14,964	528	549	14.30	10.90	7,550	6,984
Montana.....	156	164	75.00	58.00	11,700	9,512	1,060	1,000	35.40	27.20	38,232	32,640
Wyoming.....	43	44	75.00	71.00	3,225	3,124	816	775	38.40	29.70	31,334	23,018
Colorado.....	236	243	70.00	57.00	16,520	13,851	1,447	1,375	33.50	26.40	48,474	36,300
New Mexico.....	47	48	73.00	60.00	3,431	2,880	1,204	1,132	35.20	24.90	42,381	28,187
Arizona.....	35	40	105.00	95.00	3,675	3,800	1,100	1,000	38.00	26.00	41,800	26,900
Utah.....	82	87	70.00	61.00	5,740	5,307	425	433	29.80	26.40	12,665	11,431
Nevada.....	18	19	86.00	69.00	1,548	1,311	348	346	35.80	30.40	12,779	10,518
Idaho.....	146	153	72.00	65.00	10,512	9,945	543	521	32.50	27.50	17,865	14,328
Washington.....	278	286	75.00	70.00	20,850	20,020	208	256	33.10	28.30	8,004	7,245
Oregon.....	212	216	75.00	62.00	15,900	13,362	616	638	37.70	29.70	23,223	18,652
California.....	620	632	95.00	76.00	58,900	48,032	1,380	1,380	45.20	34.70	62,376	47,886
United States.....	23,594	24,028	61.22	50.97	1,515,249	1,224,767	41,993	41,324	31.36	23.78	1,316,727	982,666

CATTLE—Continued.

TABLE 307.—Milk cows: Farm price per head, 15th of month, 1910-1921.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1910.....	\$41.15	\$40.35	\$41.75	\$42.22	\$42.38	\$43.46	\$42.86	\$42.77	\$42.68	\$43.20	\$43.34	\$43.41
1911.....	44.70	44.48	45.42	44.81	44.54	43.86	42.44	42.26	42.22	42.09	42.70	42.72
1912.....	42.89	43.40	44.09	45.14	45.03	45.84	45.41	46.11	46.79	47.30	47.38	48.63
1913.....	49.51	51.42	54.02	55.34	54.80	55.20	54.80	54.78	55.73	56.47	57.71	57.19
1914.....	57.99	59.09	59.23	59.00	59.85	59.82	59.67	60.72	59.58	59.53	58.77	58.23
1915.....	58.47	57.99	58.00	57.78	58.29	58.59	60.31	58.34	58.38	58.76	57.35	55.79
1916.....	57.79	57.99	59.51	60.68	60.98	61.63	62.04	61.32	61.41	62.19	62.67	63.18
1917.....	63.92	65.93	68.46	72.09	72.78	72.87	72.81	72.53	73.93	75.79	75.00	75.16
1918.....	76.54	78.36	80.71	82.45	84.11	84.74	84.97	84.06	85.21	85.41	84.51	85.78
1919.....	86.10	84.15	83.15	90.91	93.43	93.84	94.51	94.72	93.42	93.43	93.27	95.54
1920.....	94.42	95.27	94.94	95.36	94.56	94.56	91.23	90.50	89.40	85.99	77.56	70.42
1921.....	66.82	68.44	65.37	64.35	62.03	59.89	56.55	55.85	54.33	53.39	53.28	53.30

TABLE 308.—Beef cattle: Farm price per 100 pounds, 15th of month, 1910-1921.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1910.....	\$4.71	\$4.64	\$4.87	\$5.31	\$5.23	\$5.20	\$4.84	\$4.64	\$4.65	\$4.64	\$4.48	\$4.45
1911.....	4.58	4.37	4.66	4.67	4.59	4.43	4.28	4.39	4.43	4.32	4.36	4.37
1912.....	4.46	4.61	4.75	5.15	5.36	5.23	5.17	5.37	5.35	5.26	5.22	5.33
1913.....	5.40	5.55	5.88	6.08	6.01	6.02	5.98	5.91	5.92	6.05	5.99	5.96
1914.....	6.04	6.16	6.28	6.29	6.33	6.32	6.38	6.47	6.38	6.23	6.02	6.01
1915.....	5.99	5.93	5.92	5.96	6.13	6.20	6.07	6.18	6.06	6.04	5.85	5.75
1916.....	5.85	5.99	6.37	6.66	6.73	6.91	6.78	6.51	6.55	6.37	6.44	6.36
1917.....	6.86	7.36	7.91	8.57	8.70	8.65	8.30	8.17	8.40	8.35	8.21	8.24
1918.....	8.33	8.55	8.85	9.78	10.38	10.40	10.07	9.71	9.63	9.33	9.14	9.28
1919.....	9.65	10.02	10.34	10.81	10.84	10.20	9.96	9.82	9.02	8.65	8.65	8.63
1920.....	8.99	8.98	9.08	9.20	8.97	9.32	8.93	8.56	8.29	7.77	7.15	6.36
1921.....	6.32	6.02	6.36	6.08	5.98	5.65	5.40	5.39	4.98	4.81	4.69	4.62

TABLE 309.—Veal calves: Farm price per 100 pounds, 15th of month, 1910-1921.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1910.....	\$6.41	\$6.28	\$6.59	\$6.54	\$6.33	\$6.57	\$6.37	\$6.29	\$6.43	\$6.41	\$6.39	\$6.38
1911.....	6.50	6.38	6.48	5.96	5.08	5.72	5.74	5.93	6.11	6.15	6.10	5.98
1912.....	6.06	6.07	6.11	6.22	6.23	6.33	6.33	6.62	6.33	6.90	6.77	6.88
1913.....	7.06	7.23	7.49	7.38	7.17	7.53	7.46	7.53	7.73	7.72	7.70	7.74
1914.....	7.80	7.90	7.92	7.68	7.59	7.69	7.80	8.08	8.06	7.97	7.78	7.61
1915.....	7.66	7.62	7.50	7.31	7.35	7.53	7.87	7.75	7.80	7.91	7.69	7.61
1916.....	7.67	7.87	8.11	8.00	8.08	8.39	8.54	8.59	8.77	8.89	8.60	8.79
1917.....	9.15	9.88	9.94	10.49	10.48	10.60	10.77	10.56	11.08	11.10	10.66	10.98
1918.....	11.16	11.17	11.33	11.71	11.62	11.88	12.33	12.22	12.57	12.35	11.94	12.31
1919.....	12.39	12.18	12.65	12.78	12.11	12.40	13.38	13.43	13.39	12.87	12.65	12.67
1920.....	12.89	13.12	12.98	12.72	11.69	11.68	11.44	11.64	11.38	11.64	10.77	9.27
1921.....	9.34	9.08	9.06	7.73	7.56	7.43	7.87	7.31	7.67	7.01	7.20	7.14

CATTLE—Continued.

TABLE 310.—*Cattle: Monthly and yearly average price per 100 pounds of good beef steers, Chicago, 1910 to 1921.*¹

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average. ²
1910.....	\$8 20	\$8.35	\$7.35	\$7 55	\$7.50	\$7.50	\$7.10	\$6 85	\$6 80	\$6.60	\$6.20	\$6 00	\$7 83
1911.....	6 15	6 15	6 20	6 10	5 95	6 05	6 30	6 95	6 80	6 75	6 70	6 65	6 40
1912.....	6 35	6 60	7.20	7.65	7 95	8 00	7.90	8 50	9 15	7 90	8.10	7 85	7 80
1913.....	7 90	8 25	8.30	8 15	8 00	8 15	8 25	8 30	8.50	8.40	8.25	8.20	8 21
1914.....	8 45	8 30	8.35	8 50	8.40	8.60	8 80	9 10	9 35	9.05	8 60	8 35	8 65
1915.....	8.05	7.50	7.65	7.70	8.35	8 80	9.20	9 05	8.95	8 80	8.70	8.35	8 43
1916.....	8 35	8 35	8 75	9.10	9 30	9.85	9 25	9.45	9 40	9 75	10.15	10 00	9 33
1917.....	10 15	10.50	11.25	11.75	11.90	12 15	12.35	12 70	13 10	11.70	11.10	11.45	11 67
1918.....	12 10	12.00	12 60	14.70	15 40	15 85	16 05	15 75	16 00	14 80	15.05	14.90	14.60
1919.....	15 80	15.95	16.05	15 85	15 00	13 55	15 60	16 45	15 50	16 15	15 10	14 35	15 45
1920.....	13.95	13.05	13.10	12 30	12.25	14 95	14 68	14 30	14 95	14.61	11 65	10 08	13.32
1921.....	8.94	8 57	9.41	8.22	8.33	7.94	8.09	8.32	7.67	7.59	7.52	7.31	8.16
12-year average....	9 40	9.30	9.68	9 80	9 58	10.12	10.36	10 48	10.51	10.18	9.76	9.45	9.90

¹ Prior to July, 1920, from Chicago Drovers' Journal Yearbook. ² Simple average of monthly average prices.TABLE 311.—*Calves: Monthly and yearly average price per 100 pounds, Chicago, 1910 to 1921.*¹

Year.	Jan.	F.	Mar.	Apr.	May	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average. ²
1910.....	\$8 60	\$8.65	\$9.00	\$7.85	\$7.35	\$7 85	\$7 60	\$7.75	\$8 50	\$8 65	\$8.75	\$8 50	\$8 25
1911.....	8.75	8 40	7.40	6.60	7.25	7.60	7.40	8.00	8 75	8 60	8 35	7.85	7.91
1912.....	8.75	7.50	8.00	7.40	7.75	8 00	8 75	9.75	11.25	10 60	9 85	10.25	8 94
1913.....	9.75	9.85	10.50	8 50	9.25	9.75	10.40	11.50	11.25	10.50	10 35	10.75	10 19
1914.....	11 00	10.75	9.00	8.85	9.50	9.40	10.60	11.00	11.40	10.65	10 35	8 65	10 10
1915.....	9.85	10.35	10.00	8.40	9.15	9.60	10.25	11.50	11.25	10.85	10 15	9 65	10.68
1916.....	10.15	10.65	9.65	8.75	10.40	11 25	11.40	12.00	12 40	11.50	11.85	11 75	11 38
1917.....	13 40	12.65	13 40	12.50	13.25	13.40	13.00	15 15	15.00	14.85	13 50	15.25	13.78
1918.....	15.35	14.15	15.25	14.50	13.50	16.02	16.67	17.28	18.63	16.83	16 80	16.01	17.92
1919.....	15.62	15.75	15.01	14 31	14.66	16 37	17 88	19.62	20.52	18 65	17.60	18 50	16 83
1920.....	17 74	16.73	16.73	14.22	12.12	13.68	13.98	15.08	16 39	14.18	13.74	13.30	14.58
1921.....	11.49	11.02	10.33	8.12	8 66	8.72	9.73	9.39	10.71	8.68	7.70	7.89	9 36
12-year average....	11.70	11 37	11.19	10.00	10 24	10.97	11 47	12.34	13 03	11 94	11.59	11 15	11 11

¹ Prior to June, 1918, from Chicago Drovers' Journal Yearbook. ² Simple average of monthly average prices.

CATTLE—Continued.

TABLE 312.—Cattle and calves; Monthly average price per 100 pounds, 1921.

CHICAGO.

Month.	Beef steers.					Butcher cattle.		Canners and cutters.		Veal calves.		Feeder steers.		Stock cattle.	
	Medium and heavy weight (1,401 pounds up).		Lightweight (1,101 pounds down).			Heifers, cows, and com- mon to choice.	Cows, com- mon to choice.	Bulls, com- mon to choice.	Cows and beef steers.	Light to me- dium weight, com- mon to choice.	Heavy, com- mon to choice.	Heavy, (1,401 lbs. up), com- mon to choice.	Light and medium (750 to 1,400 lbs.), com- mon to choice.	Cows, steers, and horses, com- mon to choice.	Calves, com- mon to choice.
	Choice and prime.	Good.	Me- dium.	Choice and prime.	Good.										
January.....	\$11.13	\$10.13	\$9.13	\$8.06	\$11.13	\$10.07	\$8.97	\$7.78	\$7.48	\$6.51	\$6.39	\$8.97	\$1.85	\$1.49	\$1.49
February.....	9.97	9.23	8.63	7.74	9.92	9.08	8.30	7.45	6.98	5.83	5.71	8.12	7.36	6.51	6.51
March.....	10.33	9.68	8.97	8.19	10.32	9.68	8.87	7.92	7.63	6.51	6.39	8.12	7.36	6.51	6.51
April.....	9.06	8.41	7.81	7.39	9.19	8.37	7.65	7.12	7.13	6.16	6.03	7.65	7.54	6.81	6.81
May.....	9.09	8.52	7.93	7.39	9.20	8.58	7.83	7.13	7.23	6.26	6.03	7.72	7.55	6.81	6.81
June.....	8.81	8.29	7.81	7.01	8.95	8.39	7.78	6.79	6.48	5.47	5.35	7.09	6.90	5.93	5.93
July.....	9.01	8.54	7.84	7.34	9.26	8.70	7.83	6.83	6.48	5.47	5.35	7.09	6.90	5.93	5.93
August.....	9.95	9.06	8.54	7.71	10.19	9.13	7.73	6.69	6.42	5.47	5.35	7.09	6.90	5.93	5.93
September.....	9.52	8.54	7.71	7.01	10.29	9.01	7.19	5.50	6.19	5.21	5.01	6.12	5.95	5.33	5.33
October.....	10.27	9.23	7.63	5.58	11.32	9.92	7.01	5.27	6.63	5.14	4.82	5.99	5.85	5.33	5.33
November.....	10.14	8.07	7.43	5.44	11.27	9.81	7.40	5.35	6.20	4.70	4.58	5.21	5.82	5.03	5.03
December.....	9.69	8.59	7.30	5.91	10.26	8.90	7.34	5.80	5.94	4.75	4.58	5.38	5.76	5.23	5.23
Average.....	9.75	8.93	7.96	6.82	10.11	9.16	7.91	6.57	6.76	5.62	5.36	6.01	6.75	5.99	5.99

KANSAS CITY.

January.....	\$10.76	\$9.50	\$8.55	\$7.82	\$10.46	\$9.05	\$7.96	\$7.06	\$6.89	\$5.69	\$5.51	\$3.73	\$3.20	\$3.59	\$3.59
February.....	9.12	8.45	7.89	7.31	8.94	8.18	7.57	6.81	6.22	5.24	4.96	3.61	3.93	3.71	3.71
March.....	9.77	9.12	8.63	7.97	9.61	8.69	8.30	7.53	6.99	5.97	5.18	3.69	3.80	3.80	3.80
April.....	8.53	7.95	7.56	7.13	8.65	7.95	7.47	6.92	6.37	5.73	4.82	3.19	3.58	3.58	3.58
May.....	8.62	8.07	7.67	7.21	8.65	8.03	7.60	7.03	6.51	5.63	5.34	3.25	3.65	3.65	3.65

June.....	8.36	7.87	7.38	6.59	8.54	7.59	6.34	5.81	4.88	4.33	2.62	3.15	7.36	5.57	6.93	6.66	5.51	4.53	4.37
July.....	8.67	8.24	7.44	6.11	9.15	8.51	5.73	5.81	4.75	4.20	2.85	2.78	7.45	5.71	6.61	6.40	5.26	4.03	4.07
August.....	9.36	8.74	7.37	5.07	9.85	8.51	5.22	5.83	4.24	4.24	2.55	2.73	6.98	5.14	6.61	6.16	5.12	3.04	3.99
September.....	9.36	8.26	6.56	5.16	9.84	8.47	4.78	6.14	4.05	4.13	2.58	2.72	8.42	5.29	6.13	5.82	5.12	2.93	4.23
October.....	9.50	8.45	6.76	5.08	10.34	8.73	4.74	5.69	4.41	4.08	2.68	2.85	8.42	5.82	5.93	5.82	5.16	3.98	4.48
November.....	9.37	7.71	6.18	4.95	10.51	8.33	4.69	5.80	4.41	3.55	2.82	2.92	7.50	4.81	5.63	5.51	4.91	3.92	5.51
December.....	8.76	7.42	6.28	5.20	9.97	8.05	5.01	5.71	4.38	3.80	2.66	2.82	7.07	5.19	5.75	5.71	5.14	3.75	4.92
Average.....	9.21	8.32	7.34	6.34	9.54	8.42	7.20	5.99	5.02	4.56	3.03	3.27	8.15	5.76	6.91	6.66	5.71	4.36	4.69

OMAHA.

January.....	\$10.65	\$9.47	\$8.35	\$7.20	\$10.48	\$9.05	\$7.69	\$6.69	\$5.72	\$5.92	\$5.54	\$3.87	\$4.32	\$9.33	\$6.65	\$8.19	\$7.49	\$6.47	\$5.17	\$7.12	\$5.31
February.....	8.93	8.18	7.41	6.68	8.01	7.87	7.17	6.38	6.09	5.27	4.51	3.52	4.05	8.92	6.14	7.25	6.77	5.91	4.82	6.95	5.17
March.....	9.77	9.11	8.13	7.05	9.66	8.93	7.83	7.33	6.93	5.74	5.10	3.83	4.40	8.93	6.72	8.22	7.06	6.10	5.54	7.52	5.57
April.....	8.56	8.04	7.15	6.15	8.71	8.21	7.65	6.89	6.53	5.67	5.23	3.08	3.45	7.73	6.69	7.47	6.22	5.30	4.71	7.53	5.88
May.....	8.65	8.10	7.57	7.09	8.73	8.21	7.62	6.88	6.77	5.97	5.58	3.32	3.72	8.18	6.88	7.30	7.04	6.37	4.53	7.53	5.86
June.....	8.40	7.89	7.46	6.77	8.39	7.97	7.34	6.50	6.36	5.35	4.95	3.26	3.26	7.87	6.14	7.07	6.65	5.93	4.39	7.11	5.46
July.....	8.78	8.19	7.57	6.83	9.06	8.48	7.60	6.28	6.45	5.43	5.10	2.90	3.04	8.32	5.96	6.65	6.24	5.44	4.09	7.00	5.13
August.....	9.56	8.64	7.79	6.07	9.81	8.82	7.36	5.64	6.39	5.02	4.65	2.86	3.06	7.21	5.47	6.69	6.18	5.32	4.03	6.31	4.77
September.....	9.21	8.08	6.57	5.04	9.90	8.30	6.33	4.72	6.47	4.91	4.71	2.85	2.91	8.36	5.58	6.15	5.52	5.28	4.03	6.36	4.62
October.....	9.37	8.11	6.47	4.80	10.64	8.63	6.14	4.58	6.25	4.71	4.49	2.95	2.94	8.36	5.28	5.89	5.72	5.19	4.14	6.22	4.42
November.....	9.67	8.26	6.62	4.86	10.86	8.71	6.10	4.58	6.19	4.50	4.39	2.07	3.23	7.50	4.93	5.53	5.52	5.00	4.21	6.38	4.12
December.....	9.18	7.83	6.51	5.02	10.04	8.36	6.31	4.86	5.73	4.20	4.10	2.45	3.03	7.12	5.19	5.51	5.12	5.07	4.23	6.20	4.61
Average.....	9.23	8.32	7.32	6.24	9.59	8.46	7.12	5.94	6.41	5.29	4.56	3.15	3.45	8.15	5.95	6.83	6.48	5.82	4.52	6.83	5.10

EAST ST. LOUIS.

January.....	\$10.80	\$9.54	\$8.26	\$7.58	\$10.80	\$9.48	\$8.13	\$7.10	\$5.72	\$5.02	\$5.02	\$3.92	\$4.23	\$10.40	\$7.15	\$7.73	\$7.20	\$6.50	\$5.12	\$6.92	\$5.42
February.....	9.17	8.47	7.50	6.92	9.15	8.23	7.27	6.35	7.20	5.90	5.24	3.64	4.13	9.92	7.12	7.05	6.65	5.90	4.85	6.72	5.30
March.....	9.87	9.23	8.53	7.80	9.87	9.07	8.50	7.36	7.97	6.13	5.64	3.93	4.16	9.30	7.18	7.63	7.10	6.61	5.84	6.65	5.85
April.....	8.83	8.32	7.68	7.15	8.95	8.36	7.65	6.83	7.59	6.37	5.77	3.76	3.92	7.69	6.97	6.86	6.79	6.34	5.19	6.92	5.88
May.....	8.90	8.51	7.92	7.31	9.06	8.35	7.98	7.06	7.80	6.07	5.63	3.51	3.54	8.13	6.97	6.56	6.79	5.84	4.70	6.92	5.88
June.....	8.46	7.98	7.30	6.71	8.75	8.10	7.34	6.37	7.11	5.03	4.30	2.95	3.39	7.83	6.24	6.25	5.93	5.09	4.18	6.89	5.03
July.....	8.63	8.11	7.40	6.51	9.05	8.33	7.51	6.28	7.34	4.85	4.80	2.34	3.15	8.29	6.07	5.53	5.43	4.61	3.75	6.89	5.06
August.....	9.74	9.06	7.71	6.13	9.91	9.16	7.96	5.84	4.68	4.80	4.80	2.51	3.16	7.60	6.12	6.15	5.83	5.00	4.12	6.05	5.06
September.....	9.35	8.43	6.73	5.01	9.90	8.74	6.69	4.62	7.38	4.65	4.71	2.61	2.98	8.56	5.70	5.72	5.17	4.75	3.91	5.92	4.90
October.....	9.42	8.85	6.82	4.92	10.72	9.41	6.85	4.55	7.20	4.55	4.65	2.79	2.78	8.32	5.48	5.53	5.28	4.82	4.08	5.96	4.57
November.....	9.34	8.40	6.51	5.06	10.84	9.35	6.78	4.60	6.98	4.45	4.61	2.82	2.80	7.60	5.84	5.31	5.22	4.73	3.94	5.69	4.37
December.....	9.16	8.29	6.84	5.49	10.26	8.83	7.01	5.27	6.81	4.47	4.28	2.60	2.83	7.10	5.55	5.44	5.22	4.19	3.72	5.75	4.25
Average.....	9.30	8.60	7.44	6.38	9.77	8.80	7.43	6.02	7.37	5.26	5.05	3.12	3.45	8.47	6.33	6.12	6.16	5.41	4.11	6.31	5.36

CATTLE—Continued.

TABLE 313.—*Cattle and calves: Yearly receipts at principal markets, and at all markets, 1900 to 1921.*

[In thousands—i. e., 000 omitted]

Year.	Receipts at principal and other markets. ¹										
	Chicago.	Kansas City.	Omaha.	St. Paul.	East St. Louis.	Fort Worth.	Denver.	Sioux City.	St. Joseph.	Total.	All other markets.
1900.....	2,865	2,083	828	221	698	(²)	240	300	390	7,625	.....
1901.....	3,213	2,127	818	190	802	(²)	227	309	439	8,215	.....
1902.....	3,193	2,179	1,011	306	1,113	132	324	405	517	9,280	.....
1903.....	3,704	2,137	1,071	303	1,140	447	286	379	625	10,692	.....
1904.....	3,527	2,163	944	389	1,074	643	265	321	537	9,923	.....
1905.....	3,791	2,423	1,026	489	1,124	813	294	403	547	10,910	.....
1906.....	3,742	2,559	1,079	487	1,121	838	329	385	609	11,143	.....
1907.....	3,727	2,670	1,159	520	1,133	1,022	307	410	616	11,764	.....
1908.....	3,461	2,458	1,037	463	1,145	1,069	420	385	584	11,022	.....
1909.....	3,340	2,660	1,125	497	1,211	1,197	426	426	592	11,504	.....
1910.....	3,553	2,507	1,224	604	1,208	1,071	399	439	565	11,570	.....
1911.....	3,438	2,370	1,174	539	1,067	834	298	497	513	10,785	.....
1912.....	3,158	2,147	1,017	524	1,200	1,639	414	431	494	10,424	.....
1913.....	2,888	2,319	962	532	1,100	1,186	499	394	450	10,330	.....
1914.....	2,601	1,957	939	585	1,041	1,173	443	368	356	9,466	.....
1915.....	2,685	1,965	1,218	856	992	914	424	534	441	10,657	.....
1916.....	3,250	2,331	1,434	941	1,200	1,081	601	602	480	11,920	.....
1917.....	3,820	2,902	1,720	1,197	1,405	1,960	653	707	670	15,634	.....
1918.....	4,448	3,320	1,993	1,430	1,509	1,665	728	818	870	16,781	.....
1919.....	4,233	3,085	1,975	1,401	1,473	1,267	824	814	750	15,932	.....
1920.....	3,849	2,590	1,603	1,373	1,254	1,134	617	752	643	13,725	.....
1921.....	3,540	2,499	1,435	985	1,077	984	482	620	558	12,150	.....
										7,637	19,787

¹ Prior to 1915 receipts compiled from yearbooks of stockyard companies.² Figures not available prior to 1913.³ Not in operation.TABLE 314.—*Cattle and calves: Monthly and yearly receipts at Chicago, Kansas City, Omaha, and East St. Louis, combined, 1910 to 1921.¹*

[In thousands—i. e., 000 omitted]

Year.	Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1910.....	611	515	590	498	553	630	632	915	995	1,040	834	617	8,490
1911.....	700	516	555	498	612	620	630	764	766	1,044	737	555	8,037
1912.....	660	486	502	515	484	462	516	667	868	1,010	674	676	7,520
1913.....	606	486	481	523	452	525	568	688	923	824	606	588	7,270
1914.....	526	445	481	445	404	473	457	565	784	813	558	581	6,532
1915.....	518	377	523	465	461	474	462	611	730	834	798	605	6,858
1916.....	605	531	558	452	558	530	535	807	861	1,146	915	716	8,218
1917.....	807	507	583	600	708	701	773	808	1,029	1,309	1,148	864	9,847
1918.....	763	709	779	881	638	705	967	911	1,347	1,320	1,167	1,032	11,260
1919.....	998	682	646	706	668	641	881	926	1,131	1,362	1,169	976	10,786
1920.....	847	642	608	532	642	696	669	868	1,032	932	1,029	618	9,205
1921.....	744	520	679	608	625	675	542	863	866	1,019	795	585	8,621
12-year average.....	701	540	586	561	571	564	643	783	944	1,054	871	701	8,519

¹ Figures prior to 1915 compiled from yearbooks of stockyard companies.

CATTLE—Continued.

TABLE 315.—Cattle and calves: Yearly receipts, local slaughter, and stocker and feeder shipments at public stockyards, 1919-1921.

[In thousands—i. e., 000 omitted.]

Stockyards.	Receipts.			Local slaughter.			Stocker and feeder shipments.		
	1919	1920	1921	1919	1920	1921	1919	1920	1921
Albany, N. Y.	39	36	23	4	3	2	1	1	(¹)
Amarillo, Tex.	185	147	113	1	1	1	122	90	84
Atlanta, Ga.	18	21	29	11	15	15	4	1	3
Augusta, Ga.	14	13	12	9	8	8	2	2	2
Baltimore, Md.	249	287	279	145	170	155	5	5	3
Billings, Mont.	16	2	—	1	(¹)	(¹)	9	1	—
Birmingham, Ala.	24	24	20	22	24	19	1	(¹)	(¹)
Boston, Mass.	98	75	61	—	—	—	—	—	—
Buffalo, N. Y.	749	677	609	202	190	167	39	14	8
Chattanooga, Tenn.	12	13	15	10	10	11	2	2	4
Cheyenne, Wyo.	47	23	9	—	—	—	—	—	—
Chicago, Ill.	4,253	3,849	3,540	3,032	2,603	2,377	599	418	332
Cincinnati, Ohio.	460	441	454	305	283	302	28	28	22
Cleveland, Ohio.	305	281	248	244	228	228	6	3	6
Columbia, S. C.	7	6	5	6	6	5	1	—	—
Columbus, Ohio.	3	2	3	(¹)	1	1	(¹)	(¹)	(¹)
Dallas, Tex.	9	8	8	9	8	8	—	—	—
Dayton, Ohio.	31	33	31	25	26	27	(¹)	1	—
Denver, Colo.	824	617	482	174	153	122	483	467	274
Detroit, Mich.	227	234	201	189	202	163	17	16	14
Dublin, Ga.	2	4	3	—	(¹)	(¹)	(¹)	(¹)	(¹)
East St. Louis, Ill.	1,473	1,254	1,077	1,019	744	466	224	168	185
El Paso, Tex.	203	152	170	24	21	21	151	115	102
Emeryville, Calif.	36	38	35	30	38	35	(¹)	—	—
Erie, Pa.	38	26	—	13	9	—	—	—	—
Evansville, Ind.	38	45	35	16	24	21	1	1	1
Fort Worth, Tex.	1,267	1,134	984	715	558	576	327	278	172
Fostoria, Ohio.	11	14	11	2	3	2	5	5	3
Indianapolis, Ind.	515	597	483	245	257	230	50	48	41
Jacksonville, Fla.	16	7	6	16	6	3	(¹)	(¹)	—
Jersey City, N. J.	745	833	844	745	833	843	—	—	—
Kansas City, Mo.	3,085	2,500	2,469	1,617	1,264	1,200	1,036	778	788
Knoxville, Tenn.	21	21	18	9	11	10	8	4	3
Lafayette, Ind.	17	19	18	7	8	9	2	1	1
Lancaster, Pa.	239	287	205	45	55	37	95	87	1
Logansport, Ind.	1	1	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Louisville, Ky.	246	245	246	87	87	81	36	30	37
Marion, Ohio.	13	32	7	1	1	1	1	(¹)	(¹)
Memphis, Tenn.	6	19	8	1	(¹)	5	(¹)	2	1
Milwaukee, Wis.	398	444	439	334	390	402	16	15	12
Montgomery, Ala.	52	68	50	3	4	3	9	28	10
Moultrie, Ga.	—	—	4	—	—	1	—	—	(¹)
Nashville, Tenn.	83	99	96	41	46	42	11	14	12
Nebraska City, Nebr.	2	2	1	(¹)	—	—	1	(¹)	(¹)
New Brighton, Minn.	121	73	36	—	—	(¹)	1	1	(¹)
New Orleans, La.	191	213	188	163	174	160	18	17	15
New York, N. Y.	402	316	301	399	315	300	—	—	—
Ogden, Utah.	104	64	76	11	16	13	48	23	26
Oklahoma, Okla.	593	400	315	368	228	203	136	106	80
Omaha, Nebr.	1,975	1,603	1,435	1,136	914	797	656	451	443
Orangeburg, S. C.	(¹)	—	—	(¹)	—	—	—	—	—
Pasco, Wash.	6	8	3	(¹)	(¹)	—	(¹)	(¹)	—
Peoria, Ill.	27	37	43	18	18	31	(¹)	1	4
Philadelphia, Pa.	201	227	227	195	221	225	—	—	—
Pittsburgh, Pa.	616	733	745	151	171	175	—	—	—
Portland, Ore.	125	141	120	62	70	59	21	26	0
Pueblo, Colo.	217	178	79	—	—	1	7	5	4
Richmond, Va.	29	30	28	17	18	20	2	2	2
St. Joseph, Mo.	750	648	558	531	410	370	124	103	103
St. Paul, Minn.	1,491	1,373	985	530	710	504	418	316	270
Salt Lake City, Utah.	67	49	57	19	14	25	25	16	12
San Antonio, Tex.	250	233	151	14	37	36	138	96	28
Seattle, Wash.	66	58	47	64	56	49	(¹)	—	(¹)
Sioux City, Iowa.	814	762	629	363	342	273	329	233	240
Sioux Falls, S. Dak.	8	14	17	1	6	7	1	1	5

¹ Less than 500.

CATTLE—Continued.

TABLE 315.—*Cattle and calves: Yearly receipts, local slaughter, and stocker and feeder shipments of public stockyards, 1919-1921—Continued.*

[In thousands—i. e., 000 omitted.]

Stockyards.	Receipts.			Local slaughter.			Stocker and feeder shipments.		
	1919	1920	1921	1919	1920	1921	1919	1920	1921
Spokane, Wash.....	74	67	41	36	35	23	23	23	7
Tacoma, Wash.....	29	22	25	24	22	25	3	(¹)	(¹)
Toledo, Ohio.....	57	61	25	13	18	14	4	5	4
Washington, D. C.....	23	27	28	26	25	27	(¹)	(¹)	(¹)
Wichita, Kans.....	311	242	285	123	84	63	118	104	132
Total.....	24,624	22,197	19,787	13,633	12,164	11,078	5,296	4,102	3,504

¹ Less than 500.TABLE 316.—*Cattle and calves: Monthly and yearly stocker and feeder shipments from all public stockyards, 1916-1921.*

[In thousands—i. e., 000 omitted.]

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1916 ¹ ...	221	197	253	262	289	304	171	330	464	682	461	256	3,847
1917.....	259	218	249	306	431	353	262	330	588	768	729	341	4,803
1918.....	222	214	319	355	491	393	274	418	604	701	628	366	5,013
1919.....	354	264	277	391	442	272	536	397	611	839	723	470	5,286
1920.....	313	240	241	244	323	272	218	314	483	589	553	280	4,102
1921.....	205	169	236	238	214	209	122	355	395	622	497	245	3,504

¹ Complete information for 1916 not obtainable from many markets.TABLE 317.—*Cattle and calves: Monthly and yearly receipts, slaughter, and stocker and feeder shipments at public stockyards, 1921.*

[In thousands—i. e., 000 omitted.]

Stockyards.	Jan	Feb	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Chicago, Ill.:													
Receipts.....	353	243	315	300	384	313	225	282	298	333	321	273	3,540
Local slaughter.....	233	150	215	198	192	225	168	194	203	230	203	166	2,377
Stocker and feeder shipments.....	23	22	31	23	17	18	6	27	32	52	51	30	332
Kansas City, Mo.:													
Receipts.....	168	125	170	141	167	154	155	310	369	387	231	150	2,469
Local slaughter.....	94	72	92	85	92	97	99	129	126	138	107	69	1,200
Stocker and feeder shipments.....	40	39	57	42	39	38	20	99	102	167	100	45	788
Omaha, Nebr.:													
Receipts.....	136	98	139	108	104	122	84	150	145	169	115	74	1,435
Local slaughter.....	92	60	83	69	72	83	56	75	53	69	52	23	797
Stocker and feeder shipments.....	25	20	28	15	13	15	14	64	78	90	53	28	413
East St. Louis, Ill.:													
Receipts.....	87	54	64	59	70	87	78	121	114	130	125	83	1,077
Local slaughter.....	54	30	30	27	34	38	37	50	43	48	45	30	466
Stocker and feeder shipments.....	10	8	10	9	7	11	5	20	20	34	35	16	185
St. Paul, Minn.:													
Receipts.....	72	59	89	64	70	71	52	88	88	134	131	67	985
Local slaughter.....	50	44	52	41	47	40	33	43	42	59	65	39	564
Stocker and feeder shipments.....	9	8	18	16	18	12	9	32	32	50	50	21	270
Fort Worth, Tex.:													
Receipts.....	60	35	43	54	79	76	87	132	121	131	110	56	984
Local slaughter.....	31	19	21	22	31	67	59	79	77	78	60	32	576
Stocker and feeder shipments.....	13	8	13	23	19	7	5	14	13	25	22	10	172
Sioux City, Iowa:													
Receipts.....	65	43	66	45	47	45	35	58	55	75	47	39	620
Local slaughter.....	33	23	29	24	26	27	14	23	19	21	20	15	273
Stocker and feeder shipments.....	15	13	19	13	13	10	12	31	32	45	23	14	240

CATTLE—Continued.

TABLE 317.—Cattle and calves: Monthly and yearly receipts, slaughter, and stocker and feeder shipments at public stockyards, 1921—Continued.

[In thousands—i. e., 000 omitted.]

Stockyards.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Jersey City, N. J.:													
Receipts.....	66	68	70	77	75	71	64	74	76	85	60	58	844
Local slaughter....	66	68	70	77	74	71	64	74	76	85	60	58	843
St. Joseph, Mo.:													
Receipts.....	54	44	48	37	38	41	35	52	56	61	47	45	558
Local slaughter....	34	27	31	26	26	31	27	33	37	36	30	32	370
Stocker and feeder shipments.....	5	6	7	4	5	3	3	14	14	21	13	8	103
Indianapolis, Ind.:													
Receipts.....	46	33	41	42	40	45	38	46	41	40	35	36	483
Local slaughter....	22	14	20	20	19	22	19	20	18	18	18	20	230
Stocker and feeder shipments.....	3	2	1	2	2	3	2	4	5	8	7	2	41
Buffalo, N. Y.:													
Receipts.....	51	40	53	58	62	52	43	47	46	56	48	53	609
Local slaughter....	14	10	16	16	18	15	12	16	12	15	12	11	167
Stocker and feeder shipments.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	1	1	2	2	(1)	8
Pittsburgh, Pa.:													
Receipts.....	60	41	44	52	50	57	63	70	75	83	76	74	745
Local slaughter....	14	12	15	15	17	16	15	14	19	15	11	12	175
Denver, Colo.:													
Receipts.....	39	21	25	21	41	46	32	24	33	76	85	39	482
Local slaughter....	13	9	12	9	11	11	10	11	11	10	10	5	122
Stocker and feeder shipments.....	19	10	5	5	23	32	22	6	16	46	60	30	274
Cincinnati, Ohio:													
Receipts.....	30	23	35	38	37	39	41	46	45	46	39	35	454
Local slaughter....	23	18	25	28	28	28	25	28	28	27	22	22	302
Stocker and feeder shipments.....	1	1	3	2	2	1	1	2	2	3	2	2	22
Oklahoma, Okla.:													
Receipts.....	29	19	28	19	22	20	20	38	33	38	28	21	315
Local slaughter....	18	15	16	11	12	14	16	23	23	22	19	14	203
Stocker and feeder shipments.....	5	4	9	7	6	4	3	9	9	12	10	2	80
Cleveland, Ohio:													
Receipts.....	20	16	20	23	22	25	20	22	20	20	20	20	248
Local slaughter....	19	16	19	21	20	22	19	19	18	18	19	18	228
Stocker and feeder shipments.....	(1)	(1)	(1)	1	1	1	(1)	(1)	1	1	1	(1)	6

¹ Less than 500.

TABLE 318.—Beef, fresh, chilled, and frozen: Yearly exports and imports, by principal countries.

[In thousands of pounds—i. e., 000 omitted.]

EXPORTS.

Country.	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
<i>Exported by—</i>											
Argentina.....	559,325	689,674	755,849	807,388	813,427	799,694	942,907	870,458	1,092,631	883,452	(1)
Australia.....	109,428	108,786	142,210	218,919	292,066	114,676	242,082	180,249	119,990	121,079	(1)
Brazil.....						18,770	74,209	146,500	133,397	113,831	134,255
British South Africa.....	37	240	312	165	488	5,986	17,687	47,256	18,656	44,409	12,662
Canada.....			1,013	12,034	17,837	29,460	45,836	84,376	126,334	107,170	64,412
Denmark.....	35,854	27,466	57,853	33,241	38,089	50,131	34,220	35,370	21,337	17,730	38,669
France.....	6,854	6,789	7,292	12,212	5,715	1,626	2,177	2,056	1,547	3,065	12,016
Netherlands.....	34,778	32,890	40,354	40,328	32,865	45,646	33,382	3,741	54	35,649	6,416
New Zealand.....	57,083	27,307	30,803	30,636	69,927	86,477	112,071	99,740	82,308	87,493	84,895
Sweden.....	3,731	19,720	17,609	8,604	12,280	16,521	7,186	6,148	10	3,693	4,662
United States.....	55,539	28,782	9,026	6,850	31,422	262,813	181,977	216,420	514,342	174,427	89,649
Uruguay.....	20,719	16,933	44,847	109,268	153,016	215,115	157,568	158,398	106,247	(1)	(1)

¹ Not yet available.² Year beginning July 1.³ Unclassified.⁴ Includes some "other than beef."

CATTLE—Continued.

TABLE 318.—*Beef, fresh, chilled, and frozen: Yearly exports and imports, by principal countries—Continued.*

IMPORTS.

Country.	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
<i>Imported by—</i>											
Austria-Hungary..	95	10,465	3,374	158							43,026
British South Africa											
Canada	1,150	8,246	6,154	5,043	1,504	35	12	17	4	4	89
Cuba	1,312	874	198	4,450	2,279	1,916	4,228	14,663	2,233	1,460	2,368
Denmark	111	48	52	76	136	34	17	65	147	557	(1)
France	195	1,164	938	415	1,337	1,297					
Germany	3,074	5,322	5,250	5,098	33,747	381,614	460,763	414,366	458,495	526,101	203,617
Netherlands	54,894	39,734	79,114	66,746							143,471
Sweden	274	318	2,317	7,413	3,765	1,083	85				14,902
Switzerland	791	843	1,157	1,442	453	32	82	291	10,755		
United Kingdom	3,243	5,371	5,633	4,472	2,109	472	1,276	583	3	126	826
United States	785,736	24,443	896,652	1,030,771	990,591	903,339	789,826	681,793	844,053	721,274	1,027,106
				35,822	254,319	118,590	39,772	22,072	23,339	38,462	50,182

¹ Not yet available.² Classified as "Beef" for Austria only.

HIDES.

TABLE 319.—*Hides: Monthly and yearly average price per pound, heavy native steers, at Chicago, 1910-1921.*

PACKER HIDES.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average.
1910.....	\$0.17	\$0.15	\$0.14	\$0.15	\$0.16	\$0.18	\$0.16	\$0.16	\$0.16	\$0.16	\$0.15	\$0.14	\$0.16
1911.....	.13	.13	.13	.13	.14	.16	.16	.16	.16	.16	.16	.16	.15
1912.....	.16	.16	.16	.16	.17	.17	.18	.19	.20	.20	.20	.19	.18
1913.....	.19	.18	.17	.17	.17	.18	.18	.19	.19	.20	.20	.18	.18
1914.....	.18	.18	.18	.18	.18	.19	.20	.21	.21	.21	.22	.23	.20
1915.....	.23	.23	.21	.19	.22	.24	.26	.27	.26	.26	.26	.25	.24
1916.....	.23	.23	.22	.23	.26	.27	.27	.26	.26	.23	.32	.33	.26
1917.....	.32	.31	.30	.30	.32	.32	.32	.32	.33	.34	.35	.35	.32
1918.....	.32	.29	.26	.27	.31	.33	.33	.30	.30	.30	.29	.29	.30
1919.....	.28	.28	.28	.31	.37	.41	.50	.53	.46	.48	.47	.40	.40
1920.....	.40	.40	.37	.36	.36	.31	.28	.28	.28	.23	.22	.20	.32
1921.....	.17	.15	.13	.11	.12	.14	.14	.14	.14	.15	.16	.16	.14
12-year average....	.23	.22	.21	.21	.23	.25	.25	.25	.25	.25	.25	.24	.24

COUNTRY HIDES.

	\$0.14	\$0.13	\$0.12	\$0.13	\$0.12	\$0.12	\$0.11	\$0.12	\$0.13	\$0.12	\$0.12	\$0.11	\$0.12
1910.....													
1911.....	.11	.11	.11	.11	.11	.12	.13	.13	.13	.13	.14	.13	.12
1912.....	.13	.13	.13	.13	.14	.14	.14	.15	.16	.16	.16	.16	.14
1913.....	.15	.15	.15	.15	.14	.14	.15	.15	.16	.17	.17	.16	.15
1914.....	.16	.16	.16	.15	.17	.16	.16	.16	.17	.17	.19	.20	.17
1915.....	.20	.20	.18	.17	.17	.18	.21	.20	.20	.22	.21	.20	.20
1916.....	.18	.19	.18	.19	.20	.20	.20	.21	.21	.23	.27	.24	.21
1917.....	.24	.24	.24	.24	.25	.26	.26	.27	.24	.28	.29	.26	.26
1918.....	.23	.21	.17	.19	.28	.28	.28	.24	.24	.24	.22	.22	.23
1919.....	.22	.22	.22	.24	.28	.34	.43	.47	.41	.38	.36	.28	.32
1920.....	.33	.33	.30	.28	.28	.24	.23	.20	.19	.18	.16	.14	.24
1921.....	.13	.11	.10	.09	.09	.09	.08	.08	.08	.09	.10	.10	.09
12-year average....	.18	.18	.17	.17	.19	.19	.20	.20	.19	.20	.20	.18	.19

Compiled from data in "Hide and Leather."

MILK.

TABLE 320.—Milk: Monthly wholesale price, cents per quart, in cases of 12 quarts.

[Standard or grade B milk.]

City and year.	Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average.
Boston:													
1920.....	15	15	15	15	14	14	15	15	16	16	16	16	15
1921.....	16	15	14	14	14	14	14	14	14	14	14	14	14
New York:													
1920.....	18	16	16	15	15	15	.....	17	18	18	18	17	17
1921.....	17	16	15	15	.....	.....	14	14	14	14	14	14	15
Philadelphia:													
1920.....	13	13	13	13	13	13	13	14	14	15	14	12	13
1921.....	12	12	.....	.....	10	10	10	10	10	10	10	10	20
Pittsburgh:													
1920.....	16	15	15	14	14	14	14	16	16	16	16	16	15
1921.....	15	15	14	14	14	14	14	14	14	14	14	12	14
Washington:													
1920.....	16	15	16	15	14	14	14	14	14	15	16	16	15
1921.....	14	13	14	14	11	11	.....	.....	11	12	12	12	12
Atlanta:													
1920.....	18	18	18	18	.....	.....	.....	.....	25	.....	.....	.....	19
1921.....	.....	15	.....	.....	.....	.....	14	.....	11	14	14	.....	14
Jacksonville:													
1920.....	17	17	.....	18	18	.....	22	22	22	18	18	18	19
1921.....	.....	15	15	.....	.....	16	.....	16	14	16	16	16	16
New Orleans:													
1920.....	17	17	17	17	15	15	15	15	17	17	17	16	16
1921.....	15	15	14	14	14	14	14	14	14	14	12	12	14
St. Louis:													
1920.....	15	15	15	.....	14	.....	14	15	15	15	15	15	15
1921.....	15	14	13	12	13	11	11	11	11	11	11	.....	12
Kansas City:													
1920.....	14	14	14	14	14	14	14	14	14	14	14	14	14
1921.....	12	13	12	12	12	12	12	12	12	12	13	11	12
Chicago:													
1920.....	14	14	14	14	14	14	14	16	16	16	14	14	14
1921.....	14	14	14	13	13	14	13	13	12	12	12	12	13
Detroit:													
1920.....	15	15	15	15	14	14	15	15	15	15	15	13	15
1921.....	12	12	12	12	12	12	12	12	12	12	12	12	12
Cleveland:													
1920.....	14	14	14	14	14	14	14	14	14	14	14	14	14
1921.....	14	12	12	13	12	12	12	12	12	12	12	11	12
Milwaukee:													
1920.....	12	12	11	11	11	11	12	12	12	12	10	10	11
1921.....	.....	8	8	8	8	8	7	8	8	8	8	8	8
Minneapolis:													
1920.....	12	12	12	12	12	12	12	12	12	12	12	12	12
1921.....	12	11	10	10	10	8	8	10	10	.....	10	9	10
St. Paul:													
1920.....	12	12	12	12	12	.....	12	12	12	12	12	12	12
1921.....	12	12	10	10	10	8	.....	10	.....	10	10	10	10
Denver:													
1920.....	12	12	12	12	.....	11	12	11	11	11	11	11	11
1921.....	.....	13	.....	10	9	9	8	9	8	8	8	8	9
Dallas:													
1920.....	.....	.....	20	18	.....	.....	.....	.....	.....	.....	.....	.....	.....
1921.....	.....	15	13	.....	13	.....	10	.....	10	.....	.....	12	12
Los Angeles:													
1920.....	15	15	15	15	15	15	17	17	.....	17	17	17	16
1921.....	17	15	15	15	.....	15	14	14	14	13	13	13	14
San Francisco:													
1920.....	14	14	14	14	14	14	14	14	14	14	14	15	14
1921.....	13	13	13	12	12	12	12	11	11	11	11	11	12
Portland, Oreg.:													
1920.....	14	14	14	12	12	12	12	12	13	14	13	13	13
1921.....	12	12	12	.....	.....	9	9	8	9	9	9	9	10
Seattle:													
1920.....	12	11	10	9	9	10	11	11	11	10	.....	.....	11
1921.....	9	8	9	9	8	.....	.....	8	.....	8	8	8	8

MILK—Continued.

TABLE 321.—Milk: Monthly retail price, in cents per quart, delivered to family trade in cities.

[Standard or grade B milk.]

City and year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average.
Boston:													
1920.....	17	17	17	17	16	16	17	18	18	18	18	18	17
1921.....	17	16	16	16	15	15	15	16	16	15	15	15	16
New York:													
1920.....	18	17	17	15	15	15	16	17	18	18	18	17	17
1921.....	17	16	15	15	14	14	14	15	15	15	15	15	15
Philadelphia:													
1920.....	14	14	14	14	14	14	14	15	15	15	15	13	14
1921.....	13	13	12	13	11	11	11	11	11	11	11	11	12
Pittsburgh:													
1920.....	16	16	16	15	15	15	15	16	16	16	16	16	16
1921.....	15	15	14	14	14	14	14	14	14	14	14	13	14
Washington:													
1920.....	18	18	18	18	16	16	16	16	17	18	18	18	17
1921.....	16	15	16	16	13	14	14	14	14	15	15	15	15
Atlanta:													
1920.....	23	23	-----	-----	25	25	25	25	25	25	-----	-----	24
1921.....	-----	20	-----	-----	-----	20	18	-----	18	18	18	18	19
Jacksonville:													
1920.....	20	20	20	20	20	20	25	25	25	24	23	23	22
1921.....	-----	18	18	-----	-----	20	-----	19	20	20	18	18	19
New Orleans:													
1920.....	19	19	19	19	17	17	17	17	16	16	16	14	18
1921.....	17	17	16	16	16	16	16	16	16	16	14	14	16
St. Louis:													
1920.....	16	16	16	15	15	15	15	16	16	17	17	16	16
1921.....	16	15	14	14	14	13	13	13	13	13	13	10	13
Kansas City, Mo.:													
1920.....	16	16	16	16	16	16	16	16	16	16	16	15	16
1921.....	14	14	14	14	14	13	14	14	14	14	14	14	14
Chicago:													
1920.....	15	15	14	14	14	14	14	15	16	16	15	14	15
1921.....	14	14	14	14	14	14	14	14	14	12	12	12	13
Detroit:													
1920.....	16	16	16	16	16	16	16	16	16	16	16	14	16
1921.....	13	13	13	13	13	13	13	13	13	13	13	13	13
Cleveland:													
1920.....	16	16	16	15	15	15	15	16	16	16	15	15	16
1921.....	15	14	14	14	14	13	13	13	13	13	13	13	14
Milwaukee:													
1920.....	13	13	12	12	12	12	13	13	13	13	11	11	12
1921.....	-----	10	10	10	9	9	9	10	9	9	9	9	9
Minneapolis:													
1920.....	13	13	13	13	13	13	13	13	14	14	14	14	13
1921.....	13	12	12	12	11	10	10	11	11	-----	11	10	11
St. Paul:													
1920.....	13	13	13	13	13	13	13	13	14	14	14	14	13
1921.....	13	13	12	12	11	10	-----	11	-----	11	11	10	11
Denver:													
1920.....	13	13	13	13	13	13	13	13	13	13	13	13	13
1921.....	13	13	13	12	11	11	11	11	10	10	10	10	11
Dallas:													
1920.....	-----	23	23	21	21	21	21	21	21	21	21	21	21
1921.....	-----	19	17	-----	15	-----	15	-----	15	-----	-----	15	16
Los Angeles:													
1920.....	16	16	16	16	16	16	18	18	18	18	18	18	17
1921.....	18	16	16	16	-----	16	15	14	14	14	14	14	15
San Francisco:													
1920.....	16	16	16	16	16	16	16	17	17	17	17	17	16
1921.....	16	16	15	15	15	14	14	14	14	14	14	14	15
Portland, Oreg.:													
1920.....	15	15	15	13	13	13	14	14	14	14	15	15	14
1921.....	14	14	14	-----	-----	12	12	12	12	12	12	12	13
Seattle:													
1920.....	15	15	14	12	-----	13	14	14	14	14	-----	13	14
1921.....	13	11	13	13	12	-----	-----	12	-----	12	12	11	12

BUTTER.

TABLE 322.—Butter: Farm price, cents per pound, 1st of each month, 1909-1921.

Year.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1909.....		25.1	24.5	24.2	24.0	22.5	21.9	22.4	23.3	25.0	26.2	27.4
1910.....	28.7	27.9	26.3	25.8	25.5	24.1	23.3	23.8	25.2	26.2	27.1	27.8
1911.....	27.8	24.1	22.7	22.6	21.4	20.3	20.4	21.7	23.1	23.8	25.2	27.4
1912.....	28.1	29.0	27.2	26.1	26.0	24.8	23.4	23.7	24.2	25.6	26.9	28.8
1913.....	28.4	27.6	27.5	27.6	27.0	25.5	24.7	24.9	25.9	27.5	28.2	29.2
1914.....	29.2	27.4	26.0	24.9	23.8	22.8	22.9	23.7	25.3	26.0	26.3	28.4
1915.....	28.7	27.9	26.8	25.8	25.7	24.8	24.2	24.2	24.5	25.3	26.4	27.6
1916.....	28.3	27.6	27.1	27.6	27.9	26.5	25.7	26.1	27.4	29.0	31.1	34.4
1917.....	34.0	33.5	34.1	33.5	36.1	35.0	33.5	34.0	36.1	38.9	40.9	41.9
1918.....	43.1	43.7	43.4	40.7	39.9	38.6	38.2	39.7	41.4	47.2	49.7	52.7
1919.....	54.9	49.6	43.8	47.6	50.3	49.1	47.2	48.2	49.7	51.5	56.0	60.0
1920.....	61.3	57.8	55.9	56.1	57.6	53.5	51.6	52.0	52.3	54.1	54.3	54.7
1921.....	49.0	45.0	42.1	40.4	38.6	29.4	29.0	34.1	36.6	38.2	40.9	41.1

TABLE 323.—Butter: Monthly average wholesale price of 92-score butter at five markets, 1918-1921.

[Cents per pound.]

Year.	Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average.
New York:													
1918.....		50	44	42	42	44	45	46	56	59	63	69	51
1919.....	62	52	62	64	58	52	53	55	59	68	71	72	61
1920.....	65	66	67	71	61	57	57	55	59	60	63	55	61
1921.....	52	47	48	46	32	33	40	43	43	47	45	44	43
Chicago:													
1918.....			41	42	42	42	43	45	55	56	62	67	50
1919.....	60	49	60	62	57	51	51	53	57	64	69	68	58
1920.....	63	63	66	64	57	55	55	54	57	57	60	51	58
1921.....	48	47	47	44	29	32	39	40	42	45	44	43	42
Philadelphia:													
1918.....					46	44	45	46	56	59	63	69	54
1919.....	62	52	62	65	59	53	54	56	59	68	70	73	61
1920.....	65	67	68	71	62	58	58	56	60	60	63	55	62
1921.....	53	48	49	47	33	33	40	43	43	47	46	45	44
Boston:													
1918.....					46	44	45	46	55	59	62	67	53
1919.....	63	51	62	65	69	53	53	56	58	64	69	71	61
1920.....	65	66	68	69	61	58	58	57	59	59	60	54	61
1921.....	52	48	48	46	32	34	41	43	43	46	45	44	44
San Francisco:													
1918.....										59	58	62	60
1919.....	56	49	56	56	56	54	54	55	60	63	64	65	57
1920.....	62	62	59	56	53	54	57	59	64	58	53	48	57
1921.....	42	46	38	34	31	34	39	42	44	46	46	41	40

TABLE 324.—Butter: Monthly average wholesale price of 92-score creamery at New York, 1910 to 1921.

[Cents per pound.]

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average.
1910.....	33	30	33	31	28	28	28	29	30	30	31	30	30
1911.....	26	26	24	21	22	23	25	26	27	30	34	37	27
1912.....	39	32	31	33	30	27	27	27	30	31	34	37	32
1913.....	35	36	37	35	29	28	27	28	32	31	34	36	32
1914.....	33	29	28	25	26	27	28	30	31	32	35	34	30
1915.....	34	32	30	31	29	28	27	26	27	29	31	35	30
1916.....	33	34	37	36	31	30	29	31	34	35	30	40	34
1917.....	40	44	42	44	40	39	39	41	44	45	46	50	43
1918.....	52	50	44	42	42	44	45	46	56	58	63	69	51
1919.....	62	52	62	64	58	52	53	55	59	68	71	72	61
1920.....	65	66	67	71	61	57	57	55	59	60	63	55	61
1921.....	52	47	48	46	32	33	40	43	43	47	45	44	43
12-year average....	42	40	40	40	36	35	35	36	39	41	44	45	40

BUTTER—Continued.

TABLE 325.—Butter: International trade, calendar years 1909–1920.

[Butter includes all butter made from milk, melted and renovated butter, but does not include margarine, cocoa butter, or ghee. See "General note," Table 280.]

Country.	Average, 1900–1913.		1913		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORTING COUNTRIES.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.
Argentina.....	113	6,934	(¹)	41,821	10	41,881	.....	.....
Australia.....	46	77,839	16	41,115	37	30,005	.....	13,361
Canada.....	2,358	3,973	564	10,919	1,464	16,509	1,105	164,959
Denmark.....	6,241	195,530	(¹)	32,308	441	80,622	6	2,508
Finland.....	2,379	26,337	280	1,048	11	879	119	2,812
France.....	13,713	40,769	1,067	2,360	12,752	1,119	18,584	96
Italy.....	972	7,870	73	109	1,880	51	3,104	45,576
Netherlands.....	4,987	75,133	43	5,415	615	30,242	(¹)	31,945
New Zealand.....	47	38,761	(¹)	48,275	4	38,732	2	8,100
Norway.....	976	3,137	2,498	(¹)	8,201	.....	.....	5
Russia.....	2,202	150,294	.....	3	13,817	76	16,941	83
Sweden.....	330	45,870	11,428	.....	9,519	34,536	37,451	17,488
United States.....	1,617	4,125	1,655	26,191	.....	.....	.....	.....
PRINCIPAL IMPORTING COUNTRIES.	.....	.....	.....	.....	.....	.....	.....	.....
Austria-Hungary.....	6,251	4,267	.....	.....	.....	.....	2,829	.....
Belgium.....	14,024	3,135	.....	.....	11,176	11	18,463	127
Brazil.....	4,551	34	4	173	42	563	187	10
British South Africa.....	4,025	38	2,446	1,425	387	567	658	629
Dutch East Indies.....	4,152	.....	4,385	.....	5,681	.....	.....	.....
Egypt.....	2,350	3,166	302	460	602	19	391	3
Germany.....	111,441	498	.....	.....	.....	.....	17,227	429
Switzerland.....	11,106	44	51	.....	13,250	(¹)	18,140	3
United Kingdom.....	455,489	1,179	176,092	197	174,538	262	187,799	393
Other countries.....	23,563	3,380	6,119	1,651	7,349	1,704	4,110	1,132
Total.....	674,014	689,293	207,874	213,471	261,806	289,801	333,219	236,499

¹ Less than 500 pounds.² Austria only, new boundaries.³ Two-year average.

TABLE 326.—Butter: Monthly receipts at five markets, 1918 to 1921.

[In thousands of pounds—i. e., 000 omitted.]

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
New York:													
1918.....	.....	.....	15,750	14,325	17,550	27,900	25,875	20,250	15,600	18,375	13,125	13,725	182,475
1919.....	16,439	16,119	16,232	17,125	22,904	28,419	23,372	22,893	19,650	16,219	15,285	12,041	226,698
1920.....	11,794	11,201	12,972	7,845	13,383	20,205	21,534	18,203	14,914	12,079	10,436	10,042	164,608
1921.....	12,101	11,027	12,969	14,265	21,339	27,233	21,635	23,664	21,187	17,072	15,564	14,892	212,948
Chicago:													
1918.....	.....	.....	24,051	21,039	20,780	36,173	34,554	27,037	21,134	21,916	16,122	14,544	237,350
1919.....	12,324	10,177	11,453	12,891	23,168	33,373	24,627	18,556	13,156	10,758	7,722	7,569	185,779
1920.....	10,965	9,447	11,398	10,344	17,118	25,344	27,633	20,155	15,455	11,417	9,528	8,797	176,746
1921.....	10,054	9,908	12,195	14,513	21,785	28,571	21,551	21,290	14,864	14,664	11,185	13,011	193,591
Philadelphia:													
1918.....	.....	.....	2,620	2,484	3,591	4,941	4,721	4,069	3,419	3,445	2,693	2,898	134,881
1919.....	3,824	3,250	3,748	1,101	5,064	6,660	5,026	4,356	4,111	3,847	4,181	2,993	51,191
1920.....	3,264	3,520	3,398	2,964	3,980	6,237	5,850	4,773	4,698	3,771	3,010	3,165	48,630
1921.....	3,250	2,817	3,860	4,084	6,129	7,803	6,486	5,713	5,107	4,780	4,184	4,543	58,766
Boston:													
1918.....	.....	.....	4,323	4,071	6,159	11,874	12,237	7,569	5,377	6,218	5,079	3,429	166,336
1919.....	4,014	3,821	3,140	4,378	9,554	11,107	13,699	7,609	5,241	3,412	2,210	2,038	73,223
1920.....	3,216	3,176	5,368	3,709	6,323	12,060	14,406	8,749	6,762	4,372	2,378	2,474	72,993
1921.....	3,722	3,752	4,147	3,881	8,045	12,536	9,433	9,357	6,994	6,296	3,282	3,093	74,338
San Francisco:													
1918.....	2,278	1,851	2,564	3,129	2,771	2,170	1,762	1,531	1,178	1,215	1,258	1,201	22,908
1919.....	1,266	1,479	2,014	2,792	2,979	2,434	2,202	1,832	1,094	1,337	1,333	1,209	22,031
1920.....	1,488	1,665	2,178	3,140	2,767	2,197	1,744	1,789	1,722	1,739	1,555	1,572	23,566
1921.....	1,652	1,431	1,982	2,345	2,255	2,306	2,359	2,710	2,064	2,538	2,206	1,718	25,566
Total 5 markets:													
1918.....	.....	.....	49,308	45,048	50,851	83,058	79,149	60,456	46,708	51,189	38,277	35,797	539,821
1919.....	37,867	34,846	36,592	41,287	63,669	84,093	68,926	35,246	43,282	35,573	30,731	25,910	558,922
1920.....	29,827	29,009	35,314	28,002	43,571	66,043	71,167	53,714	43,551	33,378	26,917	26,050	486,543
1921.....	30,779	28,936	35,154	39,088	59,563	78,449	61,464	62,734	50,216	45,350	26,120	37,257	565,410

¹ Ten months' total, March to December, inclusive.

BUTTER—Continued.

TABLE 327.—Cold-storage holdings of creamery butter, 1916 to 1921.

[In thousands of pounds—i. e., 000 omitted.]

Year.	Jan. 1.	Feb. 1.	Mar. 1.	Apr. 1.	May 1.	June 1.	July 1.	Aug. 1.	Sept. 1.	Oct. 1.	Nov. 1.	Dec. 1.
1916.....	48,977	31,138	15,093	8,346	1,082	7,017	53,863	102,587	105,826	100,522	85,263	67,292
1917.....	49,138	30,474	16,952	6,805	3,607	9,953	49,982	88,992	108,179	109,154	100,115	79,928
1918.....	50,728	26,618	18,808	14,629	9,528	12,698	49,140	88,305	99,334	87,883	80,874	65,111
1919.....	48,010	36,777	24,191	11,909	9,659	29,485	99,157	123,512	121,385	121,819	106,174	78,654
1920.....	58,737	38,359	22,568	12,555	7,554	12,872	52,321	117,577	117,557	115,557	101,778	79,750
1921 ¹	58,682	41,486	27,103	14,732	7,712	21,682	61,991	82,585	82,292	90,116	77,113	85,129

TABLE 328.—Butter and cheese: Monthly production of creamery butter and American cheese, United States, 1916 to 1921.

[In thousands of pounds—i. e., 000 omitted.]

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Creamery butter:													
1916.....									76,023	54,308	43,469	40,203	214,003
1917.....	6,907	38,453	47,371	53,809	75,108	98,898	94,151	83,936	76,741	56,176	42,705	48,157	753,511
1918.....	44,357	42,859	49,086	37,332	85,564	104,385	97,440	85,148	72,397	63,896	45,741	45,560	793,285
1919.....	52,189	44,343	54,822	67,487	103,941	119,337	104,156	81,468	69,815	58,723	45,041	46,662	849,941
1920.....	49,041	40,235	56,306	69,627	83,817	114,095	110,841	90,669	77,106	65,129	53,570	52,295	863,577
1921 ¹	55,412	54,876	65,500	66,363	116,073	127,941	109,283	108,897	87,634	82,786	68,604	69,104	1,020,573
American cheese (whole milk):													
1916.....									29,684	18,162	11,772	7,607	167,525
1917.....	8,519	9,415	11,913	17,577	28,932	38,796	35,296	32,243	37,613	22,303	14,262	8,070	264,949
1918.....	8,143	7,980	11,992	17,931	31,235	40,184	34,332	29,996	25,424	18,862	12,172	9,097	247,278
1919.....	10,966	11,855	19,009	21,642	34,849	44,599	35,455	30,940	26,257	23,114	13,107	10,044	281,837
1920.....	10,487	11,509	14,954	18,856	29,832	41,376	34,313	28,787	22,935	20,054	13,308	10,305	254,684
1921 ¹	13,402	12,479	17,210	22,604	38,005	35,083	26,085	26,763	23,852	20,871	13,161	11,432	254,927

¹ Four months' total, September to December, inclusive.² Preliminary.

OLEOMARGARINE.

TABLE 329.—Oleomargarine: Yearly production, United States, 1918 to 1920.

[In thousands of pounds—i. e., 000 omitted.]

Year.	Uncolored.			Colored.			Total.
	Animal and vegetable oil.	Exclusively vegetable oil.	Exclusively animal oil.	Animal and vegetable oil.	Exclusively vegetable oil.	Exclusively animal oil.	
1918.....	255,197	88,862	3,307	7,056	112	1,003	355,537
1919.....	214,759	132,906	3,391	9,793	9,793	1,165	371,317
1920.....	161,636	190,280	3,843	8,951	5,359	94	370,163
1921 ¹	103,962	99,265	624	5,960	2,026	30	211,867

¹ Preliminary.

CHEESE.

TABLE 330.—*Cheese: Monthly and yearly average price per pound, New York, 1910 to 1921.*

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average.
1910.....	\$0.17	\$0.17	\$0.17	\$0.17	\$0.14	\$0.14	\$0.15	\$0.15	\$0.15	\$0.15	\$0.15	\$0.16	\$0.16
1911.....	.15	.15	.14	.14	.11	.11	.12	.12	.14	.14	.15	.16	.14
1912.....	.16	.17	.18	.19	.15	.14	.15	.16	.16	.18	.17	.17	.17
1913.....	.17	.17	.16	.15	.13	.14	.14	.15	.16	.16	.16	.16	.15
1914.....	.17	.16	.18	.16	.14	.15	.15	.16	.16	.15	.15	.15	.16
1915.....	.15	.16	.16	.16	.17	.15	.15	.13	.14	.15	.16	.17	.15
1916.....	.17	.18	.18	.18	.18	.15	.15	.17	.19	.21	.23	.24	.19
1917.....	.24	.25	.26	.26	.26	.23	.24	.23	.25	.25	.23	.24	.25
1918.....	.24	.26	.24	.23	.24	.23	.25	.26	.28	.33	.32	.35	.27
1919.....	.35	.30	.32	.31	.32	.32	.33	.31	.31	.31	.32	.32	.32
1920.....	.32	.30	.29	.30	.30	.28	.27	.27	.25	.28	.28	.28	.29
1921.....	.24	.21	.25	.22	.17	.16	.19	.21	.21	.22	.21	.21	.21
12-year average....	.21	.21	.21	.21	.19	.18	.19	.19	.20	.21	.21	.22	.20

TABLE 331.—*Cold-storage holdings of American cheese, 1916 to 1921.*

[In thousands of pounds—i. e., 000 omitted.]

Year.	Jan. 1.	Feb. 1.	Mar. 1.	Apr. 1.	May 1.	June 1.	July 1.	Aug. 1.	Sept. 1.	Oct. 1.	Nov. 1.	Dec. 1.
1916.....	28,558	18,908	13,373	8,443	6,546	7,301	16,357	31,569	46,776	49,579	45,713	37,080
1917.....	31,855	22,113	15,560	9,842	7,928	11,626	34,159	67,595	91,545	90,671	78,087	75,166
1918.....	66,784	56,298	37,743	27,965	17,736	20,395	30,054	48,804	55,742	42,065	33,402	25,625
1919.....	19,823	15,456	9,837	6,750	6,027	12,478	37,501	62,645	76,661	81,359	72,889	62,508
1920.....	53,168	43,631	34,039	23,431	16,963	13,502	29,654	51,512	60,372	55,007	48,566	39,921
1921.....	34,115	25,000	17,477	14,294	13,466	17,814	34,948	41,284	46,635	45,163	42,969	34,055

TABLE 332.—*Cheese: International trade, calendar years 1909-1920.*

[Cheese includes all cheese made from milk; "cottage cheese," of course, is included. See "General note," Table 291.]

Country.	Average 1909-1913.		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORTING COUNTRIES.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.
Bulgaria.....	1 03	5,584						
Canada.....	1,054	167,260	224	164,163	253	107,633	480	142,768
Italy.....	13,308	60,560	746	898	11,151	1,810	5,893	2,790
Netherlands.....	522	127,379	1	32,893	42	27,372	489	99,738
New Zealand.....	3	55,561	62	96,944	31	176,099	18	136,870
Russia.....	3,911	7,011						
Switzerland.....	7,150	70,075	87	2,630	996	1,369	4,368	3,202
PRINCIPAL IMPORTING COUNTRIES.								
Algeria.....	6,592	138	2,475		2,693		5,124	
Argentina.....	10,447	2 6	82	14,177	209	19,562		
Australia.....	360	799	14	2,303	29	7,516		
Austria-Hungary.....	12,298	966						
Belgium.....	31,771	354			16,548	179	28,092	7,397
Brazil.....	4,178	2 1	159	33	210	6	1,224	4
British South Africa.....	5,169	4	262	487	45	1,580	1,235	343
Cuba.....	4,520	7	3,315	8	2,923	(3)		
Denmark.....	1,414	527	(3)	7,025	385	5,725	132	21,281
Egypt.....	8,182	4 43	2,794	85	180	25	1,657	15
France.....	49,056	26,880	11,185	4,428	15,232	7,336	25,289	15,130
Germany.....	48,687	1,967					50,344	173
Spain.....	5,032	53	238	141	557	705	3,748	354
United Kingdom.....	257,407	950	263,132	70	236,362	111	305,832	454
United States.....	46,346	5,142	7,562	48,405	11,332	14,160	15,994	16,291
Other countries.....	17,947	6,852	4,103	162	11,247	131	5,509	3,507
Total.....	535,417	538,124	296,434	376,942	310,425	371,319	455,428	450,817

1 Two-year average.

2 Four-year average.

3 Less than 500.

4 One-year average.

CHEESE—Continued.

TABLE 333.—Cold-storage holdings of all cheese other than American cheese, 1917 to 1921.

[In thousands of pounds—i. e., 000 omitted.]

Year.	Jan. 1.	Feb. 1.	Mar. 1.	Apr. 1.	May 1.	June 1.	July 1.	Aug. 1.	Sept. 1.	Oct. 1.	Nov. 1.	Dec. 1.
1917.....									3,916	3,750	3,336	3,347
1918.....	2,836	2,197	2,093	2,013	2,202	2,692	5,171	7,988	13,229	12,734	10,963	11,848
1919.....	10,402	10,263	8,771	8,352	8,810	10,813	13,905	15,749	15,925	15,234	15,091	13,906
1920.....	11,526	10,785	9,617	8,713	8,642	9,839	14,849	18,522	19,886	19,975	20,526	18,879
1921.....	17,053	15,207	12,979	10,613	10,474	10,639	12,668	15,034	16,268	17,203	16,536	14,948

TABLE 334.—Production and uses of milk in the United States, 1919–1921.

UTILIZATION OF MILK IN THE UNITED STATES, 1919–1921.

Use.	1919		1920		1921	
	Whole milk used	Per cent of total milk.	Whole milk used.	Per cent of total milk	Whole milk used.	Per cent of total milk.
	Thousand pounds.	Per cent.	Thousand pounds.	Per cent.	Thousand pounds.	Per cent.
Household purposes.....	38,619,000	42.882	¹ 39,090,000	43.600	¹ 45,143,000	45.660
Manufacturing purposes.....	45,439,000	50.456	43,676,260	48.712	46,493,408	47.030
Fed to calves.....	3,500,000	3.886	² 4,202,000	4.688	² 4,260,000	4.310
Waste, loss, and unspecified uses.	2,500,000	2.776	2,689,000	3.000	2,965,868	3.000
Grand total.....	90,057,000	100.000	89,658,000	100.000	³ 98,862,276	100.000

¹ Based on a per capita consumption of 43 gallons in 1920 and 49 gallons in 1921. Population estimated on census figures.

² Based on a consumption of 200 pounds per calf. Califerop estimated as 90 per cent of dairy cows; calves fed estimated as 85 per cent of dairy cows, and calves lost and slaughtered at birth estimated as 5 per cent of dairy cows.

³ Represents annual production of 25,061,000 cows, averaging 3,945 pounds of milk per cow.

UTILIZATION OF MILK IN MANUFACTURED PRODUCTS, 1919–1921.

Product.	Milk used per unit of product.	1919			1920			1921		
		Quantity of product manufactured.	Total whole milk used.	Per cent of total milk.	Quantity of product manufactured.	Whole milk used.	Per cent of total milk.	Quantity of product manufactured.	Whole milk used.	Per cent of total milk.
	Lbs.	M. lbs.	M. lbs.	Per ct.	M. lbs.	M. lbs.	Per ct.	M. lbs.	M. lbs.	Per ct.
Creamery butter.....	21	875,000	18,375,000	20.404	863,577	18,135,117	20.226	1,054,938	22,153,698	22.403
Farm butter.....	21	685,000	14,385,000	15.973	675,000	14,175,000	15.810	650,000	13,650,000	13.807
Cheese (all kinds).....	10	420,000	4,200,000	4.664	362,431	3,624,310	4.042	1,355,838	3,558,380	3.599
Condensed and evaporated milk.....	2.5	1,925,000	4,813,000	5.344	1,578,015	3,945,038	4.400	1,464,163	3,660,408	3.703
Powdered milk.....	8	9,000	72,000	.080	10,334	82,672	.092	4,243	33,944	.034
Powdered cream.....	19	670	12,000	.013	309	5,871	.007	130	2,470	.002
Malted milk.....	2.2	18,000	40,000	.045	19,715	43,373	.048	15,652	34,434	.035
Sterilized milk (canned).....	1	4,500	4,500	.005	5,623	5,623	.006	5,074	5,074	.005
Milk chocolate.....						² 60,000	.067		² 40,000	.041
Oleomargarine.....	.065	371,320	87,000	.097	370,163	24,256	.027	211,887	(³)	.....
		M. gals.			M. gals.			M. gals.		
Ice cream.....	13.75	230,000	3,450,000	3.831	260,000	3,575,000	3.987	244,000	3,355,000	3.396
Total whole milk used in manufacturing.....			45,439,000	50.456		43,676,260	48.712		46,493,408	47.030

¹ Includes 6,000,000 pounds of farm-made cheese.

² A large quantity of milk chocolate was made from powdered, condensed, and evaporated milk.

³ Omitted in 1921 because of negligible amount of whole milk used.

⁴ Batch-made ice cream averages 6 pounds per gallon, and continuous machine made weighs 5 pounds per gallon; average amount of milk to make 1 gallon of ice cream taken at 13.75 pounds.

EGGS.

TABLE 335.—Eggs: Farm price, cents per dozen, 1st of each month, 1909-1921.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1909.....		25.8	20.1	16.8	17.8	18.4	18.5	19.2	20.2	22.1	24.8	28.4
1910.....	30.5	28.9	22.9	18.6	18.6	18.3	18.2	17.6	19.4	22.4	25.3	29.0
1911.....	30.4	22.1	16.5	14.9	14.7	14.5	14.2	15.5	17.4	20.0	23.5	28.7
1912.....	29.5	29.1	24.5	17.8	17.1	16.7	16.7	17.4	19.1	22.0	25.9	29.7
1913.....	28.8	22.8	19.4	16.4	16.1	16.9	17.0	17.2	19.5	23.4	27.4	33.0
1914.....	39.7	28.4	24.2	17.6	16.8	17.3	17.6	18.2	21.0	23.5	25.3	29.7
1915.....	31.6	29.2	21.3	16.6	17.1	16.6	16.8	17.0	18.7	22.3	26.3	30.6
1916.....	39.6	26.8	21.2	17.9	18.1	19.0	19.7	20.7	23.3	23.1	32.2	38.1
1917.....	37.7	35.8	33.8	25.9	30.0	31.1	28.3	29.8	33.2	37.4	39.4	43.3
1918.....	49.3	49.4	40.4	31.2	31.0	29.8	30.7	34.4	35.4	41.6	47.2	55.0
1919.....	57.2	48.3	33.1	34.3	36.8	33.6	36.8	39.3	41.0	44.7	54.0	61.9
1920.....	64.8	55.9	46.6	38.8	37.4	37.0	33.7	40.0	44.2	50.1	56.9	65.0
1921.....	61.1	49.6	29.2	20.4	20.2	19.4	22.0	25.6	30.4	34.2	44.2	51.1

TABLE 336.—Eggs: Wholesale price, cents per dozen, 1921-1913.

Date.	Chicago, fresh firsts.			Cincinnati, fresh firsts.			St. Louis, fresh firsts.			Milwaukee, fresh firsts.			New York, fresh firsts.		
	Low.	High.	Average.	Low.	High.	Average.	Low.	High.	Average.	Low.	High.	Average.	Low.	High.	Average.
1921.															
January.....	52	72½	62.6	52	69	59.7	49	67	58.3	55	67	59.9	53	79	67.8
February.....	30½	53½	37.6	27	52	35.5	30	50	34.8	31	54	36.7	36½	57	42.8
March.....	22½	33½	28.1	19	33½	26.9	19½	32	25.9	22	32	27.4	24	39	31.0
April.....	21½	25½	23.6	20½	23	22.2	19½	28½	21.2	22	24½	23.2	25	29	27.1
May.....	19½	22½	21.7	18½	22½	20.6	17½	20	19.2	20	22½	21.3	20½	27	24.7
June.....	21½	26	24.7	18½	28	22.9	18	23	21.2	20	25½	22.8	24½	30	28.6
July.....	25½	30	28.4	26	32	29.3	22½	24½	22.8	25	29	27.9	29	37	33.0
August.....	29	31	30.0	31	33	32.0	25	28	26.9	28	30	28.9	32½	33	35.3
September.....	29	39	33.1	31	40	35.4	27	34	30.5	29	35½	31.8	34	46	38.8
October.....	38	51	44.3	38	55	47.5	34	46	40.5	35	46	41.4	36	58	47.9
November.....	49	55	52.4	38	61	48.3	46	50	48.2	45	53	50.2	51	64	60.4
December.....	40	56	49.3	34	69	43.9	38	50	45.0	40	53	49.3	45	62	55.6
	19½	72	36.3	18½	69	33.5	17½	67	33.0	20	67	35.1	20½	79	40.9
1920.....	37	78	51.7	37	80	52.9	33	73	48.6	35	77	50.2	40½	89	57.5
1919.....	35	59	48.2	32½	78	45.7	33	72	45.5	35	74	45.4	36½	94	55.6
1918.....	29	65	44.2	26	66	42.5	26	63	41.8	30	63	47.1	31½	72	45.6
1917.....	26	57	.....	20	57	.....	25½	51	.....	25½	53	.....	28½	62	.....
1916.....	18½	41	.....	17	47	.....	17	39	.....	17	38	.....	20½	47	.....
1915.....	16	38	.....	10	40½	.....	14½	37½	.....	15½	34	.....	18	44	.....
1914.....	17	36	.....	16½	38½	.....	14	35	.....	15	32	.....	20	62	.....
1913.....	16	37	.....	15½	42	.....	12	35	.....	13	35	.....	20	65	.....

TABLE 337.—Cold-storage holdings of case eggs, 1916 to 1921.

[In thousands of cases—i. e., 000 omitted.]

Year.	Jan. 1.	Feb. 1.	Mar. 1.	Apr. 1.	May 1.	June 1.	July 1.	Aug. 1.	Sept. 1.	Oct. 1.	Nov. 1.	Dec. 1.
1916.....	1,508	458	35	264	2,327	4,593	5,574	6,060	5,600	4,868	3,985	2,146
1917.....	920	149	7	190	2,105	4,922	6,617	6,895	6,436	5,837	4,638	2,943
1918.....	1,300	200	20	344	2,957	5,499	6,554	6,568	6,265	5,369	3,812	2,071
1919.....	740	130	26	320	3,278	6,098	7,659	7,850	7,685	6,858	5,087	3,341
1920.....	1,542	342	29	122	2,135	5,143	6,747	6,872	6,372	5,295	3,838	1,824
1921.....	408	43	43	1,926	4,909	6,844	7,534	7,605	7,210	6,269	4,380	2,403

CHICKENS AND TURKEYS.

TABLE 338.—*Chickens: Farm price, cents per pound, 1st of each month, 1909-1921.*

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1909.....	.....	9.9	10.0	10.2	10.6	10.9	11.1	11.2	11.1	11.3	11.9	10.8
1910.....	13.9	11.1	11.6	11.9	12.4	12.4	12.3	12.2	11.9	11.6	11.3	13.6
1911.....	10.5	10.6	10.6	10.8	11.0	11.0	11.2	11.2	11.1	10.9	10.3	9.6
1912.....	9.3	10.3	10.5	10.8	11.1	11.1	11.0	11.3	11.3	11.5	11.2	10.8
1913.....	10.7	10.9	11.1	11.6	11.8	12.0	12.1	12.4	12.4	12.6	12.1	11.5
1914.....	11.5	11.7	12.1	12.3	12.5	12.5	12.7	12.8	12.7	12.5	11.9	11.3
1915.....	11.2	11.5	11.7	11.9	12.1	12.2	12.2	12.2	12.1	12.0	11.8	11.5
1916.....	11.4	11.9	12.2	12.6	13.2	13.5	13.8	13.8	13.9	14.3	14.3	14.2
1917.....	13.9	14.7	15.5	16.1	17.5	17.5	17.3	17.1	17.2	18.1	17.7	17.5
1918.....	17.9	18.8	19.9	19.8	19.8	20.0	21.2	22.6	22.8	23.1	22.4	21.3
1919.....	21.7	21.6	22.2	23.5	25.2	25.7	25.2	25.9	25.7	24.2	22.9	22.3
1920.....	20.6	24.1	25.4	26.8	27.4	27.2	27.0	27.4	26.7	26.4	23.4	22.1
1921.....	20.7	21.9	22.1	22.2	21.7	20.7	21.1	21.2	20.9	20.3	19.0	18.4

TABLE 339.—*Turkeys: Farm price, cents per pound, 15th of month, 1912-1922.*

Year.	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19	1919-20	1920-21	1921-22
Oct. 15.....	13.6	14.6	14.1	13.7	17.0	20.0	23.9	26.6	30.0	25.7
Nov. 15.....	14.4	15.2	14.1	14.8	18.6	21.0	25.7	28.3	31.8	28.2
Dec. 15.....	14.8	15.5	14.5	15.5	19.6	23.0	27.0	31.1	33.1	32.5
Jan. 15.....	14.9	15.5	14.5	15.6	19.5	22.9	27.3	32.0	33.0	30.7

TABLE 340.—*Cold-storage holdings of frozen poultry, 1917 to 1921.*

[In thousands of pounds.—i. e., 000 omitted.]

Year	Jan. 1.	Feb. 1.	Mar. 1.	Apr. 1.	May 1.	June 1.	July 1.	Aug. 1.	Sept. 1.	Oct. 1.	Nov. 1.	Dec. 1.
1917.....	32,184	35,601	27,796	25,988	67,242	64,286	60,194	51,132	56,093	46,737	51,743	49,561
1918.....	64,557	68,238	56,950	44,115	26,523	18,929	17,652	18,756	23,034	29,795	44,433	71,283
1919.....	108,722	119,675	109,627	92,897	71,162	55,616	49,212	40,573	32,918	30,492	33,139	54,749
1920.....	87,512	92,253	78,421	61,436	40,525	30,535	24,790	22,364	21,361	22,953	31,070	49,046
1921.....	79,025	81,096	79,001	62,315	47,651	35,408	27,265	21,188	20,064	25,602	34,876	65,167

SHEEP.

TABLE 341.—*Sheep: Number and value on farms in the United States, January 1, 1870-1922.*

NOTE.—Figures in *italics* are census returns; figures in roman are estimates of the Department of Agriculture. Estimates of numbers are obtained by applying estimated percentages of increase or decrease to the published numbers of the preceding year, except that a revised base is used for applying percentage estimates whenever new census data are available. It should also be observed that the census of 1910 giving numbers as of Apr. 15, is not strictly comparable with former censuses, which related to numbers June 1.

[In thousands—i. e., 000 omitted.]

Year.	Number.	Farm value Jan. 1.	Year.	Number.	Farm value Jan. 1.
1870, June 1.....	<i>23,478</i>	54,062	1915.....	49,956	224,687
1880, June 1.....	<i>35,192</i>	80,757	1916.....	48,625	251,594
1890, June 1.....	<i>55,935</i>	86,447	1917.....	47,616	339,529
1900, June 1.....	<i>61,504</i>	186,271	1918.....	48,603	574,575
1910, Apr. 15.....	<i>52,448</i>	216,030	1919.....	48,860	568,265
1911.....	53,633	209,535	1920.....	39,025	408,586
1912.....	52,362	181,170	1921.....	37,452	235,855
1913.....	51,482	202,779	1922.....	36,048	173,159
1914.....	49,719	200,045			

TABLE 342.—*Sheep: Farm price per head, January 1, 1867-1922.*

Year.	Price Jan. 1.	Year.	Price Jan. 1.	Year.	Price Jan. 1.	Year.	Price Jan. 1.
1867.....	\$2.50	1881.....	\$2.39	1895.....	\$1.58	1909.....	\$3.43
1868.....	1.82	1882.....	2.37	1896.....	1.70	1910.....	4.12
1869.....	1.64	1883.....	2.53	1897.....	1.82	1911.....	3.91
1870.....	1.90	1884.....	2.37	1898.....	2.46	1912.....	3.46
1871.....	2.14	1885.....	2.14	1899.....	2.75	1913.....	3.94
1872.....	2.61	1886.....	1.91	1900.....	3.03	1914.....	4.02
1873.....	2.71	1887.....	2.01	1901.....	2.98	1915.....	4.50
1874.....	2.43	1888.....	2.05	1902.....	2.65	1916.....	5.17
1875.....	2.55	1889.....	2.13	1903.....	2.63	1917.....	7.13
1876.....	2.37	1890.....	2.41	1904.....	2.59	1918.....	11.82
1877.....	2.13	1891.....	2.50	1905.....	2.82	1919.....	11.63
1878.....	2.21	1892.....	2.58	1906.....	3.54	1920.....	10.47
1879.....	2.07	1893.....	2.66	1907.....	3.84	1921.....	6.30
1880.....	2.29	1894.....	1.98	1908.....	3.88	1922.....	4.80

SHEEP—Continued.

TABLE 343.—*Sheep: Number and value on farms January 1, 1920-1922.*

State.	Number (thousands) Jan. 1—			Average price per head Jan. 1—			Farm value (thousands of dollars) Jan. 1—		
	1920	1921	1922	1920	1921	1922	1920	1921	1922
Maine.....	119	100	95	\$9.60	\$5.50	\$4.80	\$1,142	\$550	\$456
New Hampshire.....	28	24	20	9.70	7.30	5.60	272	175	112
Vermont.....	63	58	48	11.50	6.70	5.00	724	389	240
Massachusetts.....	19	17	17	12.60	9.50	6.60	239	162	112
Rhode Island.....	3	3	3	12.10	9.90	6.30	36	30	19
Connecticut.....	11	10	9	12.60	9.50	7.50	139	95	68
New York.....	579	550	512	12.20	7.50	5.80	7,064	4,125	2,970
New Jersey.....	10	10	10	11.00	10.50	7.40	110	105	74
Pennsylvania.....	509	478	468	11.60	7.60	5.80	5,904	3,633	2,714
Delaware.....	3	3	3	10.40	7.40	6.00	31	22	18
Maryland.....	103	93	89	11.00	8.00	6.20	1,133	744	552
Virginia.....	342	335	328	11.80	7.50	5.60	4,036	2,512	1,837
West Virginia.....	510	485	480	10.70	6.40	4.80	5,457	3,104	2,304
North Carolina.....	91	89	84	9.60	6.60	4.90	874	587	412
South Carolina.....	24	23	22	7.10	3.70	3.00	170	85	66
Georgia.....	72	69	70	4.80	4.20	2.70	346	290	189
Florida.....	65	63	64	5.20	3.50	3.10	338	220	198
Ohio.....	2,103	1,977	1,957	10.10	5.70	4.60	21,240	11,269	8,002
Indiana.....	644	606	606	11.80	6.70	5.20	7,599	4,060	3,151
Illinois.....	638	561	516	12.60	6.90	5.30	8,039	3,871	2,735
Michigan.....	1,209	1,161	1,115	11.70	6.80	5.20	14,145	7,895	5,798
Wisconsin.....	480	432	367	11.00	6.40	4.60	5,280	2,765	1,688
Minnesota.....	509	468	445	11.00	6.10	4.70	5,599	2,855	2,092
Iowa.....	1,092	1,005	854	12.20	6.90	5.40	13,322	6,934	4,612
Missouri.....	1,272	1,158	1,042	12.20	6.00	4.50	15,518	6,948	4,689
North Dakota.....	299	272	250	10.90	5.70	4.60	3,259	1,550	1,150
South Dakota.....	844	675	689	10.20	5.60	4.50	8,609	3,780	3,100
Nebraska.....	573	521	521	10.70	6.00	5.20	6,131	3,126	2,709
Kansas.....	361	321	279	11.70	5.90	4.80	4,224	1,894	1,339
Kentucky.....	708	651	631	11.20	6.40	5.00	7,930	4,166	3,155
Tennessee.....	364	349	332	10.90	5.80	4.00	3,968	2,024	1,328
Alabama.....	82	79	83	5.70	4.40	2.70	467	348	224
Mississippi.....	164	148	142	6.30	3.40	3.00	1,033	503	426
Louisiana.....	130	124	124	5.40	3.80	2.80	702	471	347
Texas.....	2,650	3,047	3,077	9.60	6.10	3.40	25,440	18,587	10,462
Oklahoma.....	105	91	91	10.70	6.20	4.30	1,124	564	391
Arkansas.....	100	96	90	7.60	4.20	2.90	760	403	261
Montana.....	2,083	1,973	2,170	10.40	5.80	4.70	21,663	11,443	10,199
Wyoming.....	2,500	2,350	2,374	10.30	6.30	5.50	25,750	14,805	13,057
Colorado.....	2,055	2,306	1,954	9.10	5.30	4.60	18,974	12,222	8,988
New Mexico.....	2,566	2,468	2,343	9.20	5.90	3.90	23,607	14,561	9,138
Arizona.....	1,200	1,200	1,100	10.20	7.00	4.90	12,240	8,400	5,390
Utah.....	2,245	2,200	2,250	9.70	6.50	4.90	21,776	14,300	11,025
Nevada.....	1,180	1,100	1,190	10.50	7.60	5.30	12,390	8,360	6,307
Idaho.....	2,914	2,623	2,361	10.70	6.30	6.00	31,180	16,525	14,166
Washington.....	624	555	500	10.90	6.90	5.40	6,802	3,830	2,700
Oregon.....	2,250	2,025	1,823	10.80	6.70	4.50	24,300	13,568	8,204
California.....	2,500	2,500	2,450	11.00	6.80	5.30	27,500	17,000	12,985
United States.....	39,025	37,452	36,048	10.47	6.30	4.80	408,586	235,855	173,159

TABLE 344.—*Sheep: Farm price per 100 pounds, 15th of month, 1910-1921.*

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1910.....	\$5.63	\$5.09	\$5.64	\$6.10	\$5.79	\$5.44	\$5.47	\$4.68	\$4.81	\$4.68	\$4.63	\$4.54
1911.....	4.47	4.34	4.45	4.55	4.51	4.24	4.19	3.98	3.91	3.68	3.65	3.71
1912.....	3.89	4.01	4.12	4.57	4.74	4.82	4.21	4.26	4.11	4.19	4.05	4.21
1913.....	4.35	4.63	4.97	5.16	4.91	4.84	4.20	4.32	4.23	4.16	4.27	4.46
1914.....	4.67	4.67	4.77	4.96	4.87	4.70	4.75	4.87	4.80	4.81	4.68	4.95
1915.....	4.95	5.14	5.36	5.60	5.54	5.43	5.35	5.16	5.06	5.18	5.18	5.38
1916.....	5.52	5.90	6.35	6.61	6.66	6.54	6.33	6.22	6.25	6.20	6.41	6.77
1917.....	7.33	8.17	9.21	9.69	10.15	9.84	9.32	9.33	10.05	10.24	10.20	10.44
1918.....	10.55	10.75	11.41	11.98	12.32	11.56	11.04	10.99	10.79	10.35	10.11	9.46
1919.....	9.68	9.95	10.45	11.33	10.93	10.34	9.25	9.06	8.69	8.46	8.35	8.53
1920.....	9.34	9.97	10.25	10.66	10.34	9.13	8.21	7.54	7.24	6.62	6.20	5.54
1921.....	5.30	5.01	5.27	5.11	5.11	4.74	4.34	4.38	4.11	3.96	3.84	4.10

SHEEP—Continued.

TABLE 343.—*Lambs: Farm price per 100 pounds, 15th of month, 1910-1921.*

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1910.....	\$7.52	\$8.62	\$7.37	\$7.47	\$7.26	\$7.13	\$8.71	\$5.70	\$5.85	\$5.78	\$5.54	\$5.60
1911.....	5.71	5.44	5.49	5.77	5.74	5.51	5.42	5.29	5.02	4.68	4.68	4.63
1912.....	5.22	5.15	5.38	5.98	6.16	6.02	5.74	5.60	5.49	5.42	5.37	5.70
1913.....	6.23	6.24	6.36	6.59	6.06	6.36	6.05	5.50	5.31	5.51	5.61	5.35
1914.....	6.16	6.18	6.31	6.47	6.49	6.47	6.55	6.26	6.27	6.09	6.14	6.33
1915.....	6.47	6.67	6.09	7.35	7.32	7.29	7.21	6.70	6.71	6.70	6.76	7.02
1916.....	7.20	7.78	8.10	8.58	8.49	8.36	8.16	8.15	8.22	8.02	8.41	8.72
1917.....	9.59	10.51	11.46	12.03	12.51	12.64	11.19	12.03	13.06	14.09	13.79	13.81
1918.....	13.88	13.77	14.11	15.34	15.39	14.98	14.20	14.20	13.73	13.20	12.54	12.44
1919.....	12.71	13.17	14.03	14.61	14.34	13.89	13.09	12.91	12.25	11.47	11.45	11.85
1920.....	12.91	14.08	14.17	14.63	14.26	12.82	11.79	10.84	10.31	9.65	9.37	8.46
1921.....	8.44	7.76	7.80	7.55	7.78	7.59	7.37	6.99	6.27	5.98	6.12	6.60

TABLE 346.—*Sheep: Imports, exports, and prices, 1893-1921.*

Year ending June 30—	Imports.			Exports.		
	Number.	Value.	Average import price.	Number.	Value.	Average export price.
1895-1899.....	351,602	\$972,444	\$2.77	296,832	\$1,861,231	\$6.21
1900-1904.....	303,990	1,082,047	3.56	252,133	1,523,800	6.05
1905-1909.....	195,983	886,150	4.52	143,011	839,219	5.74
1910.....	126,152	696,879	5.52	44,517	209,000	4.69
1911.....	53,455	377,625	7.06	121,491	636,272	5.24
1912.....	23,588	157,257	6.67	157,263	626,985	3.99
1913.....	15,428	90,021	5.83	187,132	605,725	3.24
1914.....	223,719	532,404	2.38	152,600	534,543	3.50
1915.....	153,317	533,967	3.48	47,213	182,278	3.86
1916.....	235,559	917,502	3.89	52,278	231,535	4.43
1917.....	180,422	856,645	5.34	58,311	367,935	6.26
1918.....	177,681	1,979,746	11.14	7,959	97,028	12.19
1919.....	163,283	1,914,473	11.72	16,117	187,347	11.62
1920.....	199,549	2,279,949	11.43	59,155	711,549	12.03
1921.....	161,292	1,341,793	9.56	30,723	532,510	6.60

TABLE 347.—*Sheep, native and western: Monthly average price per 100 pounds, Chicago, 1910-1921.¹*

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average.
1910.....	\$5.55	\$6.50	\$7.60	\$7.60	\$6.55	\$5.10	\$4.20	\$4.20	\$4.25	\$3.95	\$3.70	\$3.90	\$5.26
1911.....	4.10	4.15	4.70	4.20	4.45	3.80	3.95	3.50	3.80	3.65	3.45	3.55	3.94
1912.....	4.30	4.15	5.30	5.90	6.15	4.50	4.25	4.05	4.15	4.00	4.05	4.45	4.60
1913.....	5.35	5.90	6.40	6.45	5.85	5.05	4.50	4.35	4.30	4.55	4.60	4.95	5.19
1914.....	5.50	5.70	5.95	6.25	5.65	5.10	5.40	5.55	5.30	5.30	5.65	5.40	5.56
1915.....	5.30	6.45	7.45	7.70	7.35	5.50	6.05	6.25	5.75	6.00	5.85	6.20	6.36
1916.....	7.20	7.75	8.25	8.15	8.20	7.35	7.25	7.35	7.80	7.50	8.00	9.00	7.82
1917.....	10.00	11.25	11.70	12.10	13.00	10.00	9.10	9.75	11.15	11.65	11.25	11.50	11.04
1918.....	12.20	12.35	13.60	15.65	14.75	13.40	12.65	13.15	11.80	10.45	9.85	9.40	12.44
1919.....	10.35	11.35	14.05	14.50	12.25	9.30	9.70	9.75	8.30	8.15	8.30	9.60	10.47
1920.....	11.30	13.35	13.40	14.25	12.25	8.50	8.90	7.70	6.85	6.45	5.75	4.70	9.49
1921.....	5.07	4.90	6.14	6.58	6.33	4.46	5.08	4.53	4.40	4.71	4.40	4.92	5.13
12 year average....	7.27	7.82	8.71	9.11	8.56	6.84	6.75	6.68	6.50	6.36	6.24	6.46	7.28

¹ Previous to 1921 figures compiled from Chicago Drovers' Journal Yearbook.

SHEEP—Continued.

TABLE 348.—*Sheep: Monthly average price per 100 pounds, 1921.*

CHICAGO.

Month.	Lambs.			Spring lambs, medium to choice.	Yearling wethers, medium to prime.	Wethers, medium to prime.	Ewes.		Breeding ewes, full mouth to yearling.	Feeder lambs, medium to choice.	Feeder ewes, medium and good.
	Medium to prime (84 pounds down).	Medium to prime (85 pounds up).	Culls and common.				Medium to choice.	Culls and common.			
January....	\$10.66	\$9.94	\$8.49	.....	\$8.82	\$5.85	\$4.77	\$2.57	\$4.25	\$9.21	\$2.50
February....	9.03	8.36	6.85	.....	6.82	5.23	4.54	2.74	.....	7.55	.....
March.....	9.73	9.21	7.65	.....	8.14	6.61	5.79	3.30	.....	8.24	.....
April.....	9.88	9.24	8.20	.....	8.40	6.71	6.11	3.42	.....	7.64	.....
May.....	10.76	10.36	8.28	\$11.84	8.88	6.65	6.06	3.38	.....	7.09	.....
June.....	10.49	.....	6.93	11.98	7.99	4.89	3.84	1.80	4.12	6.31	.....
July.....	9.70	.....	6.54	.....	7.23	5.49	4.21	1.94	4.54	6.30	.....
August.....	9.14	.....	6.33	.....	6.94	5.11	4.10	2.18	4.87	7.15	.....
September..	8.50	.....	6.13	.....	6.16	4.57	3.86	2.23	4.79	6.52	.....
October.....	8.40	.....	6.26	.....	6.30	4.94	4.11	2.18	4.96	7.00	.....
November..	9.05	.....	7.09	.....	6.88	4.93	3.80	2.07	.....	7.55	.....
December..	10.65	.....	8.67	.....	8.48	5.67	4.47	2.46	.....	9.40	.....
Average..	9.67	9.42	7.28	.....	7.59	5.55	4.64	2.52	4.59	7.60	.....

KANSAS CITY.

January....	\$9.78	.....	\$7.53	.....	\$7.97	\$5.45	\$4.53	\$2.85	\$4.50	\$3.05	\$3.13
February....	8.33	\$7.73	6.22	.....	6.54	4.77	4.29	2.57	.....	7.22	.....
March.....	9.14	8.52	6.94	.....	7.37	5.84	5.34	3.35	.....	7.62	.....
April.....	9.18	8.58	7.20	.....	7.34	6.26	5.80	3.69	.....	7.42	.....
May.....	10.05	9.62	7.98	\$10.78	8.05	5.98	5.48	3.33	.....	7.80	.....
June.....	9.64	9.19	6.48	10.41	7.26	4.18	3.27	1.75	.....	.....	.....
July.....	9.13	.....	5.83	.....	6.10	4.80	3.89	2.02	4.26	5.37	.....
August.....	8.81	.....	5.75	.....	5.65	4.65	3.78	1.98	4.37	6.30	.....
September..	8.10	.....	5.44	.....	5.20	4.34	3.63	2.00	4.29	5.99	.....
October.....	7.97	.....	5.69	.....	5.43	4.79	4.04	2.07	4.37	6.32	.....
November..	8.51	.....	6.20	.....	5.93	4.49	3.72	2.13	.....	7.21	.....
December..	9.76	.....	7.25	.....	7.35	4.92	3.94	2.25	.....	8.40	.....
Average..	9.03	8.73	6.54	.....	6.69	5.04	4.31	2.50	4.36	7.08	.....

OMAHA.

January....	\$10.32	\$9.33	\$8.13	.....	\$7.67	\$5.56	\$4.54	\$2.65	\$4.35	\$9.18	\$3.21
February....	8.48	7.80	6.14	.....	6.19	4.87	4.35	2.45	.....	6.92	2.50
March.....	9.40	8.87	7.23	.....	7.46	5.99	5.57	3.48	.....	7.99	.....
April.....	9.43	8.86	7.77	.....	7.46	6.42	6.15	3.59	.....	7.92	.....
May.....	10.44	10.07	8.46	\$11.34	8.22	6.66	6.00	3.53	.....	7.83	.....
June.....	9.82	9.67	6.77	11.72	7.56	4.47	3.50	1.87	.....	6.33	.....
July.....	9.35	.....	6.44	.....	6.48	5.05	4.22	2.00	.....	6.33	.....
August.....	8.65	.....	6.15	.....	5.96	4.92	3.76	1.81	.....	6.81	2.88
September..	8.07	.....	5.85	.....	5.27	4.24	3.45	2.08	4.22	6.15	2.94
October.....	7.91	.....	5.86	.....	5.77	4.69	3.91	2.19	4.43	6.83	3.16
November..	8.61	8.68	6.92	.....	6.11	4.70	3.64	1.94	.....	7.60	.....
December..	10.09	9.84	8.30	.....	7.42	5.11	4.01	2.20	.....	8.82	.....
Average..	9.21	9.14	7.00	.....	6.80	5.22	4.42	2.48	.....	7.39	2.94

EAST ST. LOUIS.

January....	\$9.88	.....	\$7.19	.....	\$8.37	.....	\$4.40	\$2.48	.....	.....	.....
February....	8.88	\$8.00	6.45	.....	6.60	.....	4.20	2.51	.....	.....	.....
March.....	9.78	9.06	7.04	.....	7.32	\$6.00	5.14	2.99	.....	.....	.....
April.....	9.15	8.51	7.15	\$13.22	7.26	6.25	5.40	3.24	.....	.....	.....
May.....	9.85	9.45	7.50	11.10	7.84	.....	5.45	3.25	.....	.....	.....
June.....	9.50	9.13	6.18	10.74	7.41	.....	3.46	1.75	.....	.....	.....
July.....	8.64	.....	5.76	.....	5.63	4.63	3.56	1.87	.....	.....	.....
August.....	8.08	.....	5.44	.....	5.56	4.52	3.62	1.88	.....	.....	.....
September..	7.62	.....	5.33	.....	4.94	4.11	3.49	1.81	.....	.....	.....
October.....	7.67	.....	5.40	.....	5.25	4.40	3.59	1.88	.....	.....	.....
November..	8.29	.....	5.91	.....	5.87	4.48	3.30	1.73	.....	.....	.....
December..	9.95	.....	7.56	.....	7.39	4.90	4.09	2.08	.....	.....	.....
Average..	8.94	8.83	6.41	.....	6.62	4.91	4.14	2.29	.....	.....	.....

¹ Five months average. ² Six months average. ³ Eleven months average. ⁴ Eight months average.

SHEEP—Continued.

TABLE 349.—*Sheep: Yearly receipts at principal markets, and at all markets, 1900 to 1921.*

[In thousands—i. e., 000 omitted.]

Year.	Receipts at principal and other markets. ¹										Total, all markets. ²
	Chicago.	Kansas City.	Omaha.	St. Paul.	East St. Louis.	Fort Worth.	Denver.	Sioux City.	St. Joseph.	Total.	
1900.....	3,549	860	1,277	490	416	(³)	306	61	390	7,349	.....
1901.....	4,044	980	1,315	332	520	226	67	526	8,010	.....	.....
1902.....	4,516	1,154	1,743	602	523	10	317	61	561	9,487	.....
1903.....	4,583	1,152	1,864	876	528	125	465	42	589	10,234	.....
1904.....	4,505	1,004	1,754	773	688	104	519	28	794	10,169	.....
1905.....	4,737	1,319	1,971	818	645	125	738	57	981	11,391	.....
1906.....	4,805	1,617	2,165	735	579	98	826	64	827	11,716	.....
1907.....	4,218	1,582	2,039	568	565	113	828	65	764	10,742	.....
1908.....	4,352	1,641	2,106	359	679	120	675	59	592	10,533	.....
1909.....	4,441	1,645	2,167	496	776	188	632	78	621	11,044	.....
1910.....	5,229	1,841	2,985	865	736	163	600	151	560	13,130	.....
1911.....	5,736	2,175	2,978	712	990	157	617	212	718	14,325	.....
1912.....	6,056	2,134	2,951	628	1,031	284	775	207	729	14,795	.....
1913.....	5,903	2,095	3,222	785	950	328	623	271	812	14,989	.....
1914.....	5,378	2,002	3,114	795	749	408	691	404	830	14,371	.....
1915.....	3,510	1,815	3,268	704	648	363	765	337	878	12,238	6,147
1916.....	4,291	1,758	3,171	623	671	431	1,409	321	804	13,479	7,213
1917.....	3,595	1,499	3,017	430	531	406	2,060	267	679	12,484	7,732
1918.....	4,630	1,667	3,386	630	536	335	1,652	387	827	14,050	8,435
1919.....	5,244	1,945	3,789	912	724	453	2,087	686	1,007	16,847	10,409
1920.....	4,005	1,687	2,891	729	605	394	2,079	358	843	13,591	9,947
1921.....	4,734	1,780	2,753	633	636	357	1,468	288	931	13,580	10,588

¹ Prior to 1915 receipts compiled from yearbooks of stockyard companies.² Figures not obtainable prior to 1915.³ Not in operation.TABLE 350.—*Sheep: Monthly and yearly receipts at Chicago, Kansas City, Omaha, and East St. Louis combined, 1910 to 1921.¹*

[In thousands—i. e., 000 omitted.]

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1910.....	651	522	551	477	577	631	794	1,199	1,609	1,820	1,258	702	10,791
1911.....	822	686	740	686	763	796	807	1,085	1,566	2,003	1,115	810	11,879
1912.....	1,020	849	856	770	665	671	837	1,052	1,528	1,906	1,113	905	12,172
1913.....	892	750	710	770	737	732	831	963	1,869	1,848	1,089	979	12,170
1914.....	934	863	909	858	707	716	723	979	1,558	1,512	705	779	11,243
1915.....	799	670	723	540	469	531	637	931	1,337	1,000	868	736	9,241
1916.....	742	697	632	586	632	659	634	991	1,301	1,403	854	761	9,892
1917.....	796	693	682	592	441	470	526	650	1,111	1,210	715	756	8,642
1918.....	716	525	620	518	538	554	726	989	1,770	1,569	952	741	10,218
1919.....	780	547	564	623	612	742	1,098	1,461	1,968	1,400	951	957	11,703
1920.....	666	619	580	462	532	632	827	1,189	1,288	946	817	631	9,189
1921.....	813	700	819	754	729	725	645	1,100	1,173	1,095	686	664	9,903
12-year average.....	803	677	699	636	617	655	757	1,049	1,506	1,476	927	785	10,537

¹ Prior to 1915 compiled from yearbooks of stockyard companies.

SHEEP—Continued.

TABLE 350A.—Yearly receipts, local slaughter, and stocker and feeder shipments at public stockyards in United States, 1915 to 1921.

[In thousands—i. e., 000 omitted.]

Year.	Cattle.			Hogs.			Sheep.		
	Receipts.	Local slaughter.	Stocker and feeder shipments.	Receipts.	Local slaughter.	Stocker and feeder shipments.	Receipts.	Local slaughter.	Stocker and feeder shipments.
1915.....	14,553	7,912	(¹)	36,213	24,893	(¹)	18,435	10,254	(¹)
1916.....	17,676	10,294	3,847	43,265	30,984	194	20,692	11,228	3,277
1917.....	23,086	13,275	4,803	38,042	25,440	788	20,216	9,142	4,448
1918.....	25,295	14,874	5,013	44,863	30,441	989	22,455	10,266	5,208
1919.....	24,624	13,633	5,286	44,409	30,018	902	27,256	12,646	6,956
1920.....	22,197	12,194	4,102	42,121	26,761	728	23,538	10,981	5,180
1921.....	19,787	11,078	3,504	41,101	26,335	499	24,168	12,888	3,095

¹ Complete information for 1915 and 1916 particularly on disposition of stock is not obtainable from many markets.

TABLE 351.—Sheep: Yearly receipts, local slaughter, and stocker and feeder shipments at public stockyards, 1919–1921.

[In thousands—i. e., 000 omitted.]

Stockyards.	Receipts.			Local slaughter.			Stocker and feeder shipments.		
	1919	1920	1921	1919	1920	1921	1919	1920	1921
Albany, N. Y.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	116	86	23
Amarillo, Tex.....	236	189	38	1	1	1	(¹)	(¹)	(¹)
Atlanta, Ga.....	2	1	2	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Augusta, Ga.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	2	1	(¹)
Baltimore, Md.....	371	367	466	103	121	186	1	1	(¹)
Billings, Mont.....	77	26	3	(¹)	1	1	17	9	.....
Birmingham, Ala.....	1	1	1	(¹)	1	1	(¹)	.....	.....
Boston, Mass.....	4	5	2	.....	.....	.....	.....	.....	.....
Buffalo, N. Y.....	1,100	1,032	1,380	231	263	243	14	23	4
Chattanooga, Tenn.....	3	2	3	2	2	3	1	(¹)	.....
Cheyenne, Wyo.....	442	223	148	.....	.....	.....	.....	.....	.....
Chicago, Ill.....	5,244	4,005	4,734	3,935	2,803	3,383	1,106	899	521
Cincinnati, Ohio.....	335	366	438	84	81	121	8	8	13
Cleveland, Ohio.....	467	420	370	176	168	234	4	(¹)	4
Columbia, S. C.....	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	.....	.....	.....
Columbus, Ohio.....	1	1	1	(¹)	(¹)	(¹)	.....	.....	.....
Dallas, Tex.....	(¹)	1	1	(¹)	1	1	.....	.....	.....
Dayton, Ohio.....	11	9	7	4	6	5	.....	.....	.....
Denver, Colo.....	2,087	2,079	1,468	241	239	180	1,290	1,349	643
Detroit, Mich.....	344	328	343	212	216	168	8	20	15
Dublin, Ga.....	(¹)	(¹)	.....	.....	.....	.....	(¹)	.....	.....
East St. Louis, Ill.....	724	605	636	599	465	391	70	60	33
El Paso, Tex.....	251	136	71	3	7	7	189	95	21
Emeryville, Calif.....	156	157	170	156	157	170	.....	.....	.....
Erie, Pa.....	38	38	.....	4	1	.....	.....	.....	.....
Evansville, Ind.....	14	14	8	1	3	3	(¹)	(¹)	(¹)
Ft. Worth, Tex.....	453	394	357	164	206	157	164	71	80
Fostoria, Ohio.....	11	17	21	(¹)	(¹)	(¹)	(¹)	1	1
Indianapolis, Ind.....	131	136	145	26	31	44	.....	6	10
Jacksonville, Fla.....	2	1	(¹)	1	(¹)	(¹)	1	1	.....
Jersey City, N. J.....	1,532	1,554	1,994	1,532	1,554	1,994	.....	.....	.....
Kansas City, Mo.....	1,945	1,087	1,780	1,176	1,060	1,307	672	474	324
Knoxville, Tenn.....	2	1	1	1	1	1	1	(¹)	.....
La Fayette, Ind.....	8	8	8	2	1	2	1	1	1
Lancaster, Pa.....	74	122	12	1	2	2	.....	.....	.....

¹ Less than 500.

SHEEP—Continued.

TABLE 351.—*Sheep: Yearly receipts, local slaughter, and stocker and feeder shipments at public stockyards, 1919-1921—Continued.*

[In thousands—i. e., 000 omitted.]

Stockyards.	Receipts.			Local slaughter.			Stocker and feeder shipments.		
	1919	1920	1921	1919	1920	1921	1919	1920	1921
Logansport, Ind.	(1)	1	1	.....	(1)	(1)	(1)	(1)	(1)
Louisville, Ky.	273	277	286	24	29	26	31	20	25
Marion, Ohio	32	50	15	(1)	1	(1)	2	1	1
Memphis, Tenn.	1	2	(1)	(1)	(1)	(1)	.....	.....	(1)
Milwaukee, Wis.	65	61	59	42	45	46	1	1	.....
Montgomery, Ala.	7	4	2	1	1	(1)	(1)	1	(1)
Moultrie, Ga.	1	.....	1	.....	.....	(1)	.....	.....	.....
Nashville, Tenn.	147	129	138	15	18	23	19	6	4
Nebraska City, Nebr.	1	1	(1)	.....	.....	.....	1	(1)	.....
New Brighton, Minn.	276	166	293	.....	.....	.....	33	3	75
New Orleans, La.	6	6	5	4	3	3	1	1	1
New York, N. Y.	291	158	221	291	188	221	.....	.....	.....
Ogden, Utah.	516	603	575	24	17	14	171	133	196
Oklahoma, Okla.	19	15	18	8	5	12	6	3	2
Omaha, Nebr.	3,789	2,891	2,753	1,639	1,417	1,626	1,787	1,124	670
Pasco, Wash.	131	92	72	(1)	.....	.....	131	68	.....
Peoria, Ill.	4	3	2	1	2	.....	1	(1)	.....
Philadelphia, Pa.	298	349	454	286	343	446	.....	.....	4
Pittsburgh, Pa.	767	922	1,197	103	125	148	.....	.....	.....
Portland, Oreg.	215	236	329	109	104	151	27	40	13
Pueblo, Colo.	837	734	541	.....	.....	.....	(1)	1	(1)
Richmond, Va.	10	10	13	6	7	10	2	1	1
St. Joseph, Mo.	1,007	843	931	706	615	730	200	142	107
St. Paul, Minn.	912	729	633	251	300	316	201	113	78
Salt Lake City, Utah.	388	481	368	17	15	67	277	211	112
San Antonio, Tex.	88	70	49	1	2	2	46	38	5
Seattle, Wash.	102	91	91	101	90	91	.....	.....	.....
Sioux City, Iowa.	686	358	288	282	199	191	272	90	64
Sioux Falls, S. Dak.	37	5	2	(1)	2	1	28	1	(1)
Spokane, Wash.	117	127	73	13	16	26	35	75	12
Tacoma, Wash.	33	44	55	37	37	55	1	2	(1)
Toledo, Ohio.	54	69	23	4	2	3	(1)	3	(1)
Washington, D. C.	20	27	35	20	27	34	.....	.....	.....
Wichita, Kans.	59	39	32	6	5	6	19	3	2
Total	27,256	23,538	24,168	12,646	10,981	12,858	6,956	5,180	3,925

1 Less than 500.

TABLE 352.—*Sheep: Monthly and yearly receipts, slaughter, and stocker and feeder shipments at public stockyards, 1921.*

[In thousands—i. e., 000 omitted.]

Stockyards.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Chicago, Ill.:													
Receipts.....	409	342	429	365	330	330	273	440	534	542	395	345	4,734
Local slaughter..	295	242	305	250	255	299	236	343	318	363	263	214	3,883
Stocker and feeder shipments.....	16	12	10	6	6	15	10	46	141	143	90	26	521
Kansas City, Mo.:													
Receipts.....	163	143	152	152	192	108	94	166	199	198	96	117	1,780
Local slaughter..	130	120	130	122	133	97	74	113	142	127	57	62	1,307
Stocker and feeder shipments.....	15	13	11	16	38	14	14	35	56	55	30	27	324
Omaha, Nebr.:													
Receipts.....	188	185	215	209	139	168	207	414	400	313	157	153	2,753
Local slaughter..	151	134	165	150	116	130	139	214	157	137	85	48	1,626
Stocker and feeder shipments.....	8	7	8	1	6	19	42	161	204	161	20	24	670

SHEEP—Continued.

TABLE 352.—*Sheep: Monthly and yearly receipts, slaughter, and stocker and feeder shipments at public stockyards, 1921—Continued.*

[In thousands—1 e., 000 omitted]

Stockyards	Jan.	Feb.	Mar.	Apr.	May.	June.	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
East St. Louis, Ill.:													
Receipts.....	53	30	23	28	68	119	71	80	40	42	38	44	636
Local slaughter..	41	20	15	14	33	66	44	57	25	30	25	21	391
Stocker and feeder shipments.....	3	1	1	1	2	3	2	5	4	3	2	6	23
St. Paul, Minn.:													
Receipts.....	49	42	44	8	12	15	19	56	85	172	94	87	633
Local slaughter..	24	13	14	6	8	8	13	35	42	68	65	20	316
Stocker and feeder shipments.....	4	2	2	(1)	1	1	1	4	14	34	13	2	78
Fort Worth, Tex.:													
Receipts.....	11	8	11	44	88	24	31	36	17	32	21	34	357
Local slaughter..	5	5	7	26	29	20	20	13	10	10	8	4	157
Stocker and feeder shipments.....	2	1	3	4	5	4	4	3	4	20	8	22	80
Sioux City, Iowa:													
Receipts.....	27	17	16	18	10	11	8	22	35	54	43	27	288
Local slaughter..	22	15	15	15	10	8	5	14	16	27	31	13	191
Stocker and feeder shipments.....	1	1	1	1	(1)	3	3	7	17	18	7	5	64
Jersey City, N. J.:													
Receipts.....	143	133	125	134	164	201	194	224	158	234	162	122	1,994
Local slaughter..	143	133	125	134	164	201	194	224	158	234	162	122	1,994
St. Joseph, Mo.:													
Receipts.....	92	82	94	99	64	66	52	90	97	67	56	72	931
Local slaughter..	76	66	68	71	57	59	44	62	66	52	50	59	730
Stocker and feeder shipments.....	5	2	2	2	5	5	6	21	25	13	6	12	107
Indianapolis, Ind.:													
Receipts.....	10	6	4	2	7	22	17	26	18	12	10	11	145
Local slaughter..	2	1	2	1	2	7	6	7	6	4	3	3	44
Stocker and feeder shipments.....	(1)	(1)	(1)	(1)	(1)	1	2	3	2	1	(1)	(1)	10
Buffalo, N. Y.:													
Receipts.....	166	133	144	126	81	46	59	83	96	147	156	143	1,380
Local slaughter..	24	22	23	18	12	10	12	23	22	27	27	23	243
Stocker and feeder shipments.....	1	(1)	1	(1)	(1)	(1)	(1)	1	(1)	1	-----	-----	4
Pittsburgh, Pa.:													
Receipts.....	97	61	80	100	77	127	154	143	99	82	64	113	1,197
Local slaughter..	11	10	11	12	15	13	14	12	12	14	12	12	148
Denver, Colo.:													
Receipts.....	65	95	139	111	58	28	68	87	150	338	263	66	1,468
Local slaughter..	17	17	20	15	11	9	11	15	16	28	15	6	180
Stocker and feeder shipments.....	23	14	24	12	2	7	26	5	37	193	253	47	643
Cincinnati, Ohio:													
Receipts.....	7	4	6	5	45	116	99	81	30	19	14	12	438
Local slaughter..	4	4	5	4	14	10	14	17	16	13	11	9	121
Stocker and feeder shipments.....	(1)	-----	(1)	(1)	-----	1	1	5	4	1	(1)	(1)	13
Oklahoma, Okla.:													
Receipts.....	1	1	2	1	2	1	2	3	1	1	2	1	18
Local slaughter..	(1)	1	2	1	1	1	2	1	(1)	1	1	1	12
Stocker and feeder shipments.....	-----	-----	-----	-----	(1)	1	(1)	(1)	1	-----	(1)	(1)	2
Cleveland, Ohio:													
Receipts.....	37	17	23	27	20	20	22	28	32	46	51	47	370
Local slaughter..	21	15	16	19	15	10	18	21	19	27	23	24	234
Stocker and feeder shipments.....	-----	-----	-----	-----	1	1	(1)	-----	1	1	1	-----	4

¹ Less than 500.

SHEEP—Continued.

TABLE 353.—Mutton: Yearly exports and imports, by principal countries.

[In thousands of pounds—1. e., 000 omitted.]

EXPORTS

Country.	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
<i>Exported by—</i>											
Argentina.....	107,567	159,411	174,758	191,273	129,334	77,250	113,136	87,787	111,145	125,131	(1)
Australia.....	10,222	129,511	15,372	201,912	193,301	38,344	66,813	19,173	70,637	216,971	(1)
British South Africa.....	67	10	10	2	112	323	1	2	1	13	(1)
Canada.....	70	50	35	58	1,056	83	188	844	731	4,939	8,060
Denmark.....		348	422	263	209	810	365		1	232	1,135
France.....		284	319	309	247	232	229	132	114	134	995
Netherlands.....		15,535	21,052	15,080	19,894	25,150	4,857	4,125	2	5,286	7,011
New Zealand.....	127,867	211,533	210,799	246,863	280,324	302,218	251,245	169,644	139,575	529,693	428,000
Russia.....	618	341	310	423	105	4125	2				
Sweden.....		169	78	113	152	54	2	5	1	(5)	(5)
United States.....	1,997	2,374	5,076	4,789	3,847	4,231	5,258	2,862	1,631	3,009	3,575
Uruguay.....	8,662	6,473	3,309		5,356	7,806	8,038	4,589	5,919	(1)	(1)

IMPORTS.

<i>Imported by—</i>											
British South Africa.....		2,746	1,402	1,593	162	24	10	20	1	175	1,975
Canada.....		3,409	5,333	5,410	4,194	2,906	2,786	2,008	5,311	4,746	7,406
Cuba.....		40	23	18	83	52	56	13	22	81	67
Denmark.....		4,605	4,055	3,072	4,357	2,913	858		(2)	835	1,340
France.....		155	622	1,194	975	6,346	20,409	29,309	35,172	29,944	63,448
Germany.....		651	488	716	1,933						4,971
Netherlands.....		19	116	69	42	49	10	40	2,985	13	1,224
Sweden.....		1,268	1,331	1,384	938	522	116	26	3	37	(5)
United Kingdom.....	622,266	611,868	574,698	604,132	577,339	527,517	406,814	292,922	237,862	478,987	742,601
United States.....				554	19,876	11,879	17,235	5,624	608	8,209	101,168

¹ Not yet available.² Less than 500 pounds.³ Not separately stated.⁴ Year beginning July 1.⁴ Tallow.

WOOL.

TABLE 354.—Wool: Yearly estimated production, by countries and grand divisions.

[In millions of pounds—1. e., 000,000 omitted.]

Country.	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
Australasia.....	834	820	833	750	827	767	645	742	742	825	852
South America.....	586	500	555	531	455	477	480	470	470	484	487
North America.....	341	338	322	315	309	308	307	301	318	336	328
United Kingdom.....	142	143	143	133	125	121	121	121	125	118	99
Russia in Europe.....	320	320	320	320	320	320	320	320	320	320	150
France.....	78	78	78	78	80	75	75	65	65	50	50
Germany.....	26	26	26	26	26	26	26	26	26	26	37
Italy.....	21	22	21	22	22	22	22	22	22	22	35
All other in Europe.....	225	225	225	225	227	239	240	240	240	236	330
Asia.....	218	273	273	273	273	273	273	273	273	327	327
Africa.....	162	175	175	208	208	208	208	208	208	150	220
Total.....	2,953	2,920	2,971	2,881	2,872	2,836	2,717	2,791	2,809	2,894	2,965

Source: Annual Wool Review of the National Association of Wool Manufacturers.

WOOL—Continued.

TABLE 355.—Wool: Estimated production, 1919-1921.

State.	Production (000 omitted).			Weight per fleece.			Number of fleeces (000 omitted).		
	1919	1920	1921	1919	1920	1921	1919	1920	1921
	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>			
Maine.....	725	760	660	6.4	6.4	6.0	113	119	110
New Hampshire.....	180	182	155	6.6	6.5	6.7	27	28	23
Vermont.....	438	430	399	7.2	7.2	6.3	61	60	63
Massachusetts.....	90	95	95	6.6	6.5	6.0	14	15	16
Rhode Island.....	15	14	13	5.8	6.1	5.9	3	2	2
Connecticut.....	56	63	57	5.9	5.6	6.0	9	11	10
New York.....	3,351	3,291	2,941	7.0	6.9	6.7	479	477	439
New Jersey.....	58	60	55	7.0	7.0	6.0	8	9	9
Pennsylvania.....	3,444	3,532	3,403	7.0	6.5	6.4	492	551	532
Delaware.....	16	17	16	5.7	5.8	3.5	3	3	5
Maryland.....	551	562	523	6.0	6.0	6.0	92	94	87
Virginia.....	1,520	1,596	1,558	5.0	4.6	4.6	304	347	339
West Virginia.....	2,600	2,500	2,300	5.3	5.0	4.9	491	506	469
North Carolina.....	380	420	395	4.4	4.2	4.2	86	100	94
South Carolina.....	133	101	97	4.3	4.5	3.5	24	22	28
Georgia.....	167	165	160	3.1	3.2	2.8	54	52	57
Florida.....	102	157	150	3.5	3.2	3.1	46	49	48
Ohio.....	15,265	14,500	13,200	7.5	7.4	7.2	2,035	1,959	1,833
Indiana.....	4,069	3,654	3,458	7.4	7.0	7.0	550	522	494
Illinois.....	4,183	3,974	3,578	8.0	7.8	7.6	523	509	471
Michigan.....	7,836	8,385	7,714	7.4	7.6	7.2	1,059	1,103	1,071
Wisconsin.....	3,310	3,219	2,818	7.6	7.4	7.0	436	435	403
Minnesota.....	3,054	2,660	2,340	7.5	7.1	7.2	407	375	325
Iowa.....	5,082	5,966	5,369	8.0	7.7	7.5	710	773	716
Missouri.....	7,706	7,552	6,645	7.1	6.8	6.5	1,635	1,111	1,022
North Dakota.....	1,826	1,899	1,633	7.7	7.5	7.7	237	253	212
South Dakota.....	5,222	4,804	4,324	7.5	7.0	7.2	696	686	601
Nebraska.....	1,730	1,888	1,641	7.9	8.0	7.4	219	236	222
Kansas.....	1,754	2,087	1,878	7.6	7.5	7.0	221	278	268
Kentucky.....	3,211	3,000	2,600	5.2	5.0	4.7	618	600	553
Tennessee.....	1,453	1,462	1,320	4.8	4.8	4.5	309	305	293
Alabama.....	235	292	189	4.2	4.0	3.9	61	73	63
Mississippi.....	500	475	470	4.2	3.6	3.5	119	132	134
Louisiana.....	600	600	508	3.9	3.9	3.7	154	154	137
Texas.....	14,986	18,200	18,000	7.2	7.0	7.7	2,081	2,600	2,338
Oklahoma.....	526	477	482	7.0	7.2	7.3	75	66	66
Arkansas.....	375	394	355	4.9	4.5	4.3	77	88	83
Montana.....	18,267	16,000	16,400	8.4	7.9	8.3	2,173	2,025	1,976
Wyoming.....	26,000	21,000	21,500	8.5	8.3	8.2	3,359	2,530	2,622
Colorado.....	7,322	6,888	6,839	6.6	6.7	7.0	1,111	1,028	977
New Mexico.....	11,600	10,600	10,100	6.3	6.3	6.4	1,841	1,683	1,578
Arizona.....	5,400	4,800	5,000	6.3	6.5	6.0	857	738	833
Utah.....	17,000	16,150	16,500	7.4	7.8	8.0	2,297	2,071	2,062
Nevada.....	7,750	7,500	7,000	7.6	7.3	7.3	1,020	1,027	959
Idaho.....	22,145	18,650	16,800	8.4	8.1	8.0	2,638	2,302	2,100
Washington.....	5,779	5,201	4,421	8.6	8.7	8.8	672	598	502
Oregon.....	16,029	14,435	14,435	8.5	8.4	8.6	1,887	1,718	1,678
California.....	15,217	14,300	14,070	7.4	7.6	7.5	2,056	1,882	1,876
United States....	249,958	235,005	221,564	7.4	7.3	7.3	33,899	32,301	30,799

WOOL—Continued.

TABLE 356.—Wool (unwashed): Farm price, cents per pound, 15th of month, 1910-1921.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1910.....	24.5	24.6	24.9	22.3	22.8	19.5	10.0	19.5	17.7	18.1	17.9	17.8
1911.....	17.3	17.3	16.8	15.7	14.7	15.5	15.4	16.0	15.6	15.5	15.6	15.5
1912.....	16.2	16.3	16.9	17.3	17.8	18.7	18.9	18.8	18.7	18.5	18.6	18.6
1913.....	18.6	18.7	18.4	17.7	16.3	15.6	13.9	15.8	15.8	15.5	15.6	16.1
1914.....	15.7	15.7	16.4	16.8	17.2	18.4	18.5	18.7	18.6	18.0	18.1	18.6
1915.....	18.6	20.2	22.8	22.7	22.0	23.7	24.2	23.8	23.3	22.7	22.7	23.3
1916.....	23.3	24.2	25.9	26.3	28.0	28.7	28.6	29.0	28.4	28.7	29.4	30.8
1917.....	31.8	32.7	36.7	38.8	43.7	49.8	54.3	54.8	54.2	55.5	55.9	58.2
1918.....	58.1	57.1	60.0	60.0	58.2	57.4	57.5	57.4	57.7	57.7	56.4	56.2
1919.....	55.2	51.1	51.3	47.9	48.0	50.5	51.8	52.2	51.3	50.6	51.0	51.6
1920.....	53.3	52.5	51.5	51.3	50.3	38.6	29.5	28.3	28.0	27.5	21.9	21.9
1921.....	19.6	19.8	18.9	17.9	16.0	15.4	15.5	15.4	15.5	15.8	15.6	16.9

TABLE 357.—Wool: Monthly and yearly average price per pound, Boston market, 1910 to 1921.

OHIO, PENNSYLVANIA, AND WEST VIRGINIA—FINE CLOTHING, UNWASHED.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly average.
1910.....	\$0.28	\$0.28	\$0.27	\$0.25	\$0.24	\$0.22	\$0.22	\$0.21	\$0.21	\$0.23	\$0.23	\$0.23	\$0.24
1911.....	.23	.22	.21	.20	.19	.19	.20	.20	.21	.21	.21	.22	.21
1912.....	.22	.22	.22	.22	.22	.22	.24	.24	.24	.24	.24	.24	.23
1913.....	.24	.24	.23	.22	.21	.21	.21	.21	.21	.21	.21	.21	.22
1914.....	.21	.21	.22	.22	.23	.24	.25	.25	.25	.24	.24	.24	.23
1915.....	.25	.29	.29	.26	.26	.26	.27	.27	.27	.27	.27	.27	.27
1916.....	.28	.28	.29	.31	.31	.31	.31	.31	.31	.33	.34	.37	.31
1917.....	.39	.42	.45	.44	.47	.55	.58	.63	.66	.68	.65	.65	.54
1918.....	.65	.65	.65	.67	.64	.62	.67	.64	.62	.67	.64	.62	.64
1919.....	.67	.66	.64	.63	.63	.68	.68	.70	.70	.67	.68	.70	.62
1920 ¹.....	.70	.75	.76	.70	.65	.60	.57	.54	.54	.42	.38	.33	.58
1921.....	.31	.31	.32	.32	.31	.30	.28	.28	.28	.28	.29	.31	.30
12-year average...	.36	.37	.37	.36	.36	.36	.37	.37	.38	.37	.36	.37	.37

¹ Prices June to December, 1920, largely nominal.

TERRITORY—STAPLE, FINE, AND FINE MEDIUM, SCOURED.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly average.
1910.....	\$0.74	\$0.73	\$0.71	\$0.68	\$0.63	\$0.61	\$0.61	\$0.62	\$0.62	\$0.63	\$0.63	\$0.63	\$0.65
1911.....	.61	.59	.54	.53	.52	.52	.55	.56	.59	.60	.61	.61	.57
1912.....	.61	.61	.61	.61	.61	.61	.63	.68	.68	.68	.67	.67	.64
1913.....	.66	.64	.59	.56	.55	.54	.54	.54	.54	.53	.53	.52	.56
1914.....	.52	.56	.57	.59	.60	.61	.61	.63	.61	.59	.61	.61	.59
1915.....	.63	.73	.73	.71	.69	.71	.71	.71	.71	.71	.71	.73	.71
1916.....	.74	.77	.77	.79	.79	.81	.82	.85	.89	.89	.97	1.05	.84
1917.....	1.13	1.23	1.28	1.33	1.38	1.74	1.74	1.78	1.81	1.80	1.80	1.80	1.57
1918.....	1.80	1.80	1.83	1.85	1.80	1.80	1.85	1.80	1.80	1.85	1.80	1.80	1.82
1919.....	1.60	1.52	1.58	1.65	1.65	1.75	1.85	1.85	1.85	2.00	2.00	2.00	1.73
1920 ¹	2.00	2.05	2.05	2.00	2.00	1.75	1.60	1.45	1.30	1.20	.95	.90	1.60
1921.....	.84	.90	.89	.88	.86	.82	.82	.82	.82	.82	.84	.88	.85
12-year average...	.99	1.01	1.01	1.02	1.01	1.02	1.03	1.02	1.02	1.02	1.01	1.02	1.02

¹ Prices June to December, 1920, largely nominal.

Source: 1910-1920 data from National Association of Wool Manufacturers; 1921 data from Boston Commercial Bulletin.

WOOL—Continued.

TABLE 358.—*Wool: Quarterly average price per pound on farms, by leading districts, 1910-1921.*

Year and month.	Ohio, Pennsyl- vania, and West Virginia.	Michi- gan, Wiscon- sin, and New York.	Ken- tucky and Indiana.	Missouri, Iowa, and Illinois.	Texas.	Cal- ifornia.	Mon- tana, Wyo- ming, Utah, Idaho, Ore., on, Nevada, and Arizona.	New Mexico.	Florida, Ala- bama, Missis- sippi, Louis- iana, and Georgia.
1910-14:									
January.....	\$0.23	\$0.21	\$0.22	\$0.20	\$0.16	\$0.14	\$0.17	\$0.15	\$0.21
April.....	.22	.20	.21	.19	.16	.14	.16	.15	.19
July.....	.22	.21	.21	.19	.16	.15	.16	.14	.19
October.....	.22	.21	.20	.19	.15	.13	.16	.14	.18
1915:									
January.....	.24	.23	.23	.20	.15	.16	.21	.17	.17
April.....	.26	.26	.26	.24	.18	.20	.22	.18	.18
July.....	.28	.29	.28	.26	.19	.20	.22	.19	.21
October.....	.28	.28	.27	.26	.18	.17	.21	.19	.20
1916:									
January.....	.29	.29	.28	.26	.20	.18	.24	.21	.20
April.....	.32	.32	.33	.30	.23	.24	.27	.22	.25
July.....	.34	.34	.34	.31	.24	.24	.27	.24	.25
October.....	.35	.34	.34	.31	.25	.21	.28	.24	.26
1917:									
January.....	.38	.37	.35	.33	.26	.31	.35	.27	.25
April.....	.48	.48	.48	.45	.35	.45	.44	.37	.32
July.....	.64	.61	.59	.57	.44	.52	.53	.46	.44
October.....	.66	.64	.62	.58	.47	.51	.56	.45	.46
1918:									
January.....	.69	.65	.62	.59	.50	.53	.57	.47	.45
April.....	.69	.65	.66	.61	.51	.49	.55	.54	.49
July.....	.67	.65	.65	.61	.52	.50	.55	.49	.53
October.....	.67	.65	.64	.60	.51	.50	.54	.44	.54
1919:									
January.....	.62	.58	.62	.56	.45	.42	.51	.35	.50
April.....	.58	.52	.53	.49	.42	.43	.48	.42	.44
July.....	.63	.58	.55	.53	.46	.47	.49	.46	.45
October.....	.63	.57	.55	.51	.44	.42	.48	.43	.44
1920:									
January.....	.63	.58	.54	.52	.46	.45	.50	.45	.43
April.....	.58	.50	.48	.44	.45	.44	.44	.44	.41
July.....	.33	.30	.34	.28	.30	.28	.28	.25	.25
October.....	.28	.26	.27	.22	.24	.23	.26	.22	.19
1921:									
January.....	.27	.23	.22	.18	.20	.13	.19	.15	.17
April.....	.22	.19	.17	.17	.15	.10	.16	.14	.16
July.....	.19	.18	.16	.15	.14	.12	.16	.12	.13
October.....	.20	.18	.17	.15	.14	.13	.16	.14	.14

WOOL—Continued.

TABLE 359.—Wool: *International trade, calendar years 1909-1920.*

"Wool" in this table includes: Washed, unwashed, scoured, and pulled wool, slips, sheep's wool on skins (total weight of wool and skins taken); and all other animal fibers included in United States classification of wool. The following items have been considered as not within this classification: Corded, combed, and dyed wool; flecks, goatskins with hair on, mill waste, maul, and tops. See "General note," Table 291.

Country.	Average, 1909-1913.		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
PRINCIPAL EXPORT- ING COUNTRIES.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.
Algeria.....	2,445	19,871	19	10,269	2,689	16,592	2,392	13,978
Argentina.....	214	328,204	38	256,613	54	339,208	.....	215,472
Australia.....	324	678,679	397	607,585	43	680,769	.....	.....
British India.....	23,721	56,496	29,495	41,501	27,344	36,104	22,766	28,959
British South Africa.....	7	164,651	97	135,296	889	202,039	183	191,248
Chile.....	1,247	28,223	206	25,204	128	27,500	675	30,392
China.....	.....	42,684	.....	49,195	.....	56,705	.....	20,147
New Zealand.....	168	194,801	6	108,725	5	274,247	87	162,327
Persia.....	12,753	10,023	946	1,342	431	1,558	.....	.....
Peru.....	13	9,333	1	14,914	24	11,329	.....	.....
Spain.....	2,446	28,505	24,406	8,442	6,739	19,095	4,488	14,846
Uruguay.....	.....	139,178	.....	78,141	.....	141,330	.....	69,393
PRINCIPAL IMPORT- ING COUNTRIES.								
Austria-Hungary.....	63,942	9,622	.....	.....	.....	22,605	.....	.....
Belgium.....	305,367	106,440	.....	.....	102,704	29,703	243,122	154,325
Canada.....	7,794	1,323	19,396	3,117	8,035	10,100	12,268	6,289
France.....	601,628	84,973	90,185	863	347,690	8,478	362,124	33,696
Germany.....	481,988	42,817	.....	.....	.....	.....	122,779	1,230
Japan.....	10,223	.....	49,590	.....	56,552	.....	75,355	.....
Netherlands.....	31,991	26,382	274	.....	16,303	3,783	14,256	5,702
Russia.....	106,184	32,406	.....	.....	.....	.....	.....	.....
Sweden.....	7,267	149	754	(*)	15,371	58	11,036	.....
Switzerland.....	11,211	338	7,959	9	10,249	151	10,317	234
United Kingdom.....	550,931	42,027	444,687	2,347	985,510	18,708	720,457	22,536
United States.....	203,298	446	453,727	407	445,893	2,840	259,618	8,845
Other countries.....	48,668	55,754	84,418	6,403	85,131	15,952	88,772	9,044
Total.....	2,458,820	2,190,905	1,206,599	1,847,373	2,111,841	1,896,549	1,953,250	988,660

* Three-year average.

* Austria only.

* Less than 500.

* One-year average.

SWINE.

TABLE 360.—Swine: *Number and value on farms in the United States, January 1, 1870-1922.*

NOTE.—Figures in *italics* are census returns; figures in *roman* are estimates of the Department of Agriculture. Estimates of numbers are obtained by applying estimated percentages of increase or decrease to the published numbers of the preceding year, except that a revised base is used for applying percentage estimates whenever new census data are available. It should also be observed that the census of 1910, giving numbers as of Apr. 15, is not strictly comparable with former censuses, which related to numbers June 1.

[In thousands—i. e., 000 omitted.]

Year.	Number.	Farm value, Jan. 1.	Year.	Number.	Farm value, Jan. 1.
1870, June 1.....	25,135	\$140,532	1915.....	64,618	\$637,479
1880, June 1.....	17,632	211,080	1916.....	67,766	569,573
1890, June 1.....	57,410	281,680	1917.....	67,503	792,598
1900, June 1.....	62,868	346,014	1918.....	70,978	1,387,261
1910, Apr. 15.....	58,186	533,309	1919.....	74,581	1,642,598
1911.....	65,620	615,170	1920.....	59,344	1,131,674
1912.....	65,410	523,328	1921.....	56,097	727,390
1913.....	61,178	603,109	1922.....	56,996	573,405
1914.....	58,933	612,951			

SWINE—Continued.

TABLE 361.—Swine: Farm price per head January 1, 1867-1922.

Year.	Price, Jan. 1.	Year.	Price, Jan. 1.	Year.	Price, Jan. 1.	Year.	Price, Jan. 1.
1867.	\$4.03	1881.	\$4.70	1895.	\$4.97	1909.	\$6.55
1868.	3.29	1882.	5.97	1896.	4.35	1910.	9.17
1869.	4.65	1883.	6.75	1897.	4.10	1911.	9.37
1870.	5.59	1884.	5.57	1898.	4.39	1912.	8.00
1871.	5.61	1885.	5.02	1899.	4.40	1913.	9.36
1872.	4.01	1886.	4.26	1900.	5.50	1914.	10.40
1873.	3.67	1887.	4.48	1901.	6.20	1915.	9.87
1874.	3.98	1888.	4.98	1902.	7.08	1916.	8.40
1875.	4.80	1889.	5.79	1903.	7.78	1917.	11.75
1876.	6.00	1890.	4.91	1904.	6.15	1918.	19.54
1877.	5.66	1891.	4.15	1905.	5.99	1919.	22.02
1878.	4.85	1892.	4.60	1906.	6.18	1920.	19.07
1879.	3.18	1893.	6.41	1907.	7.62	1921.	12.97
1880.	4.43	1894.	5.98	1908.	6.03	1922.	10.06

TABLE 362.—Swine: Number and value on farms January 1, 1920-1922, by States.

State.	Number (thousands) Jan. 1—			Average price per head Jan. 1—			Farm value (thousands of dollars) Jan. 1—		
	1920	1921	1922	1920	1921	1922	1920	1921	1922
Maine.	91	73	69	\$24.50	\$21.00	\$14.70	\$2,230	\$1,533	\$1,014
New Hampshire.	42	33	30	24.00	20.00	15.00	1,008	660	450
Vermont.	73	63	58	22.50	14.80	12.40	1,642	932	719
Massachusetts.	104	83	76	27.00	20.50	16.30	2,808	1,702	1,239
Rhode Island.	13	12	12	30.00	21.00	17.50	390	252	210
Connecticut.	61	55	47	27.50	20.00	17.00	1,678	1,100	709
New York.	661	559	520	22.50	17.50	14.50	13,522	9,782	7,540
New Jersey.	130	126	132	25.20	20.00	17.00	3,303	2,520	2,244
Pennsylvania.	1,191	1,143	1,143	23.70	17.50	14.50	28,227	20,002	16,574
Delaware.	39	37	41	19.00	16.00	10.00	741	592	410
Maryland.	306	291	285	19.00	13.00	11.50	5,814	3,783	3,278
Virginia.	941	847	805	15.00	11.50	9.60	14,115	9,740	7,728
West Virginia.	305	293	293	18.00	14.00	10.80	5,490	4,102	3,164
North Carolina.	1,271	1,246	1,238	20.00	15.70	12.00	25,420	19,562	15,096
South Carolina.	845	853	938	21.50	13.50	9.20	18,168	11,516	8,630
Georgia.	2,071	2,030	2,131	16.90	11.50	8.60	35,000	23,345	18,327
Florida.	755	740	725	13.00	10.00	7.00	9,815	7,400	5,075
Ohio.	3,084	2,806	2,862	19.20	13.30	10.90	59,213	37,320	31,196
Indiana.	3,757	3,532	3,567	19.00	13.00	11.00	71,383	45,916	39,237
Illinois.	4,639	4,129	4,046	20.50	13.70	10.50	95,100	56,567	42,453
Michigan.	1,106	1,084	1,051	22.00	14.30	11.30	24,332	15,501	11,876
Wisconsin.	1,596	1,676	1,659	23.50	14.50	10.50	37,506	24,302	17,420
Minnesota.	2,381	2,262	2,330	24.00	15.30	11.20	57,144	34,609	26,096
Iowa.	7,864	7,471	7,546	21.80	14.50	11.00	171,435	108,330	83,006
Missouri.	3,889	3,656	3,693	16.50	11.00	8.50	64,168	40,216	31,390
North Dakota.	453	431	435	21.00	14.00	11.00	9,618	6,034	4,785
South Dakota.	1,954	1,759	1,900	21.50	13.50	10.00	42,011	23,746	19,000
Nebraska.	3,436	3,505	3,680	20.90	13.50	10.00	71,812	47,318	36,800
Kansas.	1,733	1,837	2,113	17.50	12.00	9.50	30,328	22,044	20,074
Kentucky.	1,604	1,278	1,214	13.00	9.90	7.50	19,552	12,652	9,105
Tennessee.	1,832	1,594	1,546	15.00	9.50	8.00	27,480	15,143	12,368
Alabama.	1,497	1,347	1,307	12.80	10.00	8.60	19,162	13,470	11,240
Mississippi.	1,373	1,195	1,219	14.50	9.50	8.00	19,908	11,352	9,752
Louisiana.	861	749	756	14.30	11.70	8.60	12,169	8,763	6,502
Texas.	2,226	2,426	2,475	19.50	11.80	8.50	43,407	28,627	21,038
Oklahoma.	1,304	1,213	1,334	15.10	10.30	8.50	19,690	12,494	11,339
Arkansas.	1,378	1,268	1,255	12.50	8.80	7.10	17,225	11,158	8,910
Montana.	167	160	180	20.00	16.50	13.10	3,340	2,640	2,358
Wyoming.	72	68	73	18.40	14.00	12.00	1,325	952	876
Colorado.	450	414	455	18.00	12.30	9.60	8,100	5,092	4,368
New Mexico.	88	90	94	21.80	15.00	9.00	1,918	1,350	846
Arizona.	50	48	53	18.00	16.00	12.00	900	768	636
Utah.	99	90	90	15.00	13.00	10.00	1,485	1,170	900
Nevada.	27	25	25	14.00	11.00	10.00	378	275	250
Idaho.	240	206	196	17.80	12.50	11.00	4,272	2,575	2,156
Washington.	265	236	212	23.30	15.00	12.50	6,174	3,540	2,650
Oregon.	267	240	233	19.50	12.80	10.70	5,206	3,072	2,493
California.	909	818	834	18.00	14.50	11.70	16,362	11,861	9,758
United States.	59,344	56,097	56,996	19.07	12.97	10.06	1,131,674	727,380	573,405

SWINE—Continued.

TABLE 363.—Hogs: Farm price per 100 pounds, 1910-1921.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1910.....	\$7.76	\$7.87	\$8.93	\$9.26	\$8.59	\$8.46	\$8.15	\$7.78	\$8.27	\$8.08	\$7.61	\$7.13
1911.....	7.44	7.04	6.74	6.17	5.72	5.66	5.92	6.54	6.53	6.09	5.86	5.72
1912.....	5.74	5.79	5.94	6.78	6.79	6.65	6.64	7.11	7.47	7.07	7.05	6.89
1913.....	6.77	7.17	7.62	7.94	7.45	7.61	7.81	7.79	7.68	7.70	7.33	7.16
1914.....	7.45	7.75	7.80	7.80	7.60	7.43	7.72	8.11	8.11	7.43	7.00	6.67
1915.....	6.37	6.34	6.33	6.45	6.77	6.80	6.94	6.61	6.79	7.18	6.35	6.02
1916.....	6.32	7.07	7.86	8.21	8.37	8.21	8.40	8.61	9.22	8.67	8.74	8.76
1917.....	9.16	10.33	12.32	13.61	13.72	13.50	13.35	14.24	15.69	16.15	15.31	15.73
1918.....	15.26	15.03	15.58	15.76	15.84	15.37	15.58	16.89	17.50	16.50	15.92	15.82
1919.....	13.69	13.53	16.13	17.39	18.00	17.80	19.22	19.30	15.81	13.88	13.36	12.66
1920.....	13.36	12.62	13.59	13.73	13.44	13.18	13.65	13.59	13.98	13.57	11.64	8.90
1921.....	8.72	8.58	9.13	7.96	7.62	7.22	8.09	8.73	7.51	7.31	6.66	6.52

TABLE 364.—Hogs: Monthly and yearly average price per 100 pounds, Chicago, 1910 to 1921.¹

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Weighted average.
1910.....	\$8.55	\$9.05	\$10.55	\$9.90	\$9.55	\$9.45	\$8.75	\$8.35	\$8.90	\$8.50	\$7.60	\$7.65	\$8.90
1911.....	7.95	7.40	6.85	6.25	6.00	6.25	6.70	7.30	6.90	6.45	6.30	6.40	6.70
1912.....	6.23	6.20	7.10	7.80	7.65	7.50	7.65	8.25	8.45	8.75	7.75	7.49	7.55
1913.....	7.45	8.15	8.90	9.05	8.55	8.65	9.05	8.35	8.30	8.20	7.75	7.70	8.35
1914.....	8.30	8.60	8.70	8.65	8.45	8.20	8.70	9.00	8.85	7.65	7.50	7.10	8.30
1915.....	6.90	6.80	6.75	7.30	7.60	7.60	7.75	6.90	7.25	7.90	6.65	6.40	7.10
1916.....	7.20	8.20	9.65	9.75	9.85	9.70	9.80	10.30	10.70	9.80	9.60	9.95	9.60
1917.....	10.90	12.45	14.80	15.75	15.90	15.50	15.20	16.90	18.20	17.15	17.40	16.85	15.10
1918.....	16.30	16.65	17.10	17.45	17.45	16.60	17.75	19.00	19.65	17.70	17.70	17.55	17.45
1919.....	17.60	17.65	19.10	20.40	20.60	20.40	21.85	20.00	17.45	14.35	14.20	13.60	17.85
1920.....	14.97	14.55	14.94	14.79	14.28	14.68	14.84	14.74	15.88	14.17	11.83	9.55	13.91
1921.....	9.41	9.42	10.00	8.50	8.35	8.19	9.69	9.26	7.61	7.72	7.01	6.92	8.51
12-year average	10.15	10.43	11.20	11.30	11.19	11.06	11.48	11.53	11.51	10.70	10.11	9.76	10.78

¹ Prior to 1920 from Chicago Drovers' Journal Yearbook.

TABLE 365.—Hogs: Monthly average and top price per 100 pounds, 1921.

CHICAGO.

Month.	Butcher, bacon, and shipper hogs.				Packing sows.		Pigs, 130 pounds down, medium to choice.	Stock pigs, 130 pounds down, common to choice.	Bulk of sales.	Top.
	Heavy weight, 251 pounds up, medium to choice.	Medium weight, 201 to 250 pounds, medium to choice.	Light weight, 151 to 200 pounds, common to choice.	Light lights, 130 to 150 pounds, common to choice.	Smooth (250 pounds up).	Rough (200 pounds up).				
1921.										
January.....	\$9.36	\$9.54	\$9.72	\$9.75	\$8.76	\$8.37	\$9.66	.....	\$9.47	\$10.35
February.....	9.20	9.55	9.90	9.94	8.45	7.91	9.52	.....	9.42	10.75
March.....	9.64	10.14	10.65	10.53	8.75	8.17	10.31	.....	10.01	11.75
April.....	8.34	8.69	8.96	8.96	7.46	6.92	8.66	.....	8.54	10.25
May.....	8.29	8.49	8.56	8.46	7.63	7.17	8.06	.....	8.40	9.05
June.....	8.23	8.35	8.39	8.33	7.80	7.43	8.06	.....	8.24	9.25
July.....	9.95	10.33	10.47	10.34	9.04	8.57	10.04	.....	9.80	11.75
August.....	9.47	10.07	10.25	9.95	8.32	7.86	9.35	.....	9.23	11.85
September.....	8.03	8.46	8.39	8.05	6.87	6.45	7.64	.....	7.59	9.65
October.....	8.04	8.28	8.17	8.05	7.04	6.57	7.95	.....	7.73	9.00
November.....	7.08	7.12	7.12	7.30	6.56	6.23	7.53	.....	7.03	8.25
December.....	6.90	7.05	7.25	7.43	6.14	5.63	7.43	.....	7.02	8.25
Average.....	8.54	8.54	8.99	8.92	7.74	7.23	8.68	.....	8.54	¹ 11.85

¹ Top for year.

SWINE—Continued.

TABLE 365.—Hogs: Monthly average and top price per 100 pounds, 1921—Continued.

KANSAS CITY.

Month.	Butcher, bacon, and shipper hogs.				Packing sows.		Pigs, 130 pounds down, medium to choice.	Stock pigs, 130 pounds down, common to choice.	Bulk of sales.	Top.
	Heavy weight, 251 pounds up, medium to choice.	Medium weight, 201 to 250 pounds, medium to choice.	Light weight, 151 to 200 pounds, common to choice.	Light hogs, 130 to 150 pounds, common to choice.	Smooth (250 pounds, up).	Rough (200 pounds, up).				
1921.										
January.....	\$9.21	\$9.29	\$9.18	\$9.16	\$8.45	\$8.10	\$9.37	\$8.99	\$9.26	\$9.90
February.....	8.48	9.05	9.10	9.12	7.51	7.09	9.60	9.25	9.07	10.05
March.....	9.23	9.72	9.84	9.86	8.03	7.50	10.78	10.14	9.77	11.00
April.....	7.57	7.91	8.24	8.20	6.52	5.95	.....	8.60	8.06	9.85
May.....	7.71	7.94	8.10	7.97	6.73	6.05	.....	8.03	8.01	8.55
June.....	7.74	7.91	7.91	7.82	6.87	6.16	.....	7.80	7.91	8.80
July.....	9.62	9.81	9.74	9.61	8.78	8.21	.....	8.82	9.86	11.30
August.....	8.97	9.29	9.35	9.20	7.61	7.00	.....	8.67	9.23	11.25
September.....	7.54	7.93	7.75	7.53	6.29	5.51	.....	7.54	7.79	9.50
October.....	7.55	7.74	7.52	7.41	6.64	5.91	.....	7.50	7.82	8.45
November.....	6.67	6.77	6.80	6.88	6.00	5.43	.....	7.04	6.53	7.90
December.....	6.66	6.84	6.92	6.95	5.69	5.28	.....	6.71	6.84	7.85
Average.....	8.08	8.35	8.37	8.31	7.09	6.52	.....	8.26	8.35	¹ 11.30

OMAHA.

1921.										
January.....	\$9.17	\$9.30	\$9.31	.....	\$8.86	\$8.55	.....	\$8.77	\$9.12	\$9.90
February.....	8.54	9.00	9.22	.....	8.06	7.41	.....	8.90	8.81	9.70
March.....	9.36	9.71	9.86	.....	8.73	8.17	.....	9.48	9.48	10.75
April.....	7.73	8.17	8.37	.....	7.04	6.42	.....	8.50	7.80	9.65
May.....	7.74	8.04	8.14	.....	7.25	6.62	.....	7.87	7.84	8.65
June.....	7.66	7.88	7.94	.....	7.21	6.62	.....	7.76	7.70	8.85
July.....	9.30	9.53	9.59	.....	8.71	8.28	.....	8.36	9.19	11.00
August.....	8.84	9.31	9.48	.....	8.04	7.49	.....	8.58	8.50	11.10
September.....	7.45	7.77	7.94	.....	6.61	6.11	.....	7.54	6.97	9.35
October.....	7.36	7.59	7.72	\$7.26	6.57	6.10	.....	7.59	7.02	8.50
November.....	6.62	6.73	6.75	6.59	6.02	5.64	.....	6.98	6.45	7.75
December.....	6.43	6.59	6.65	6.61	5.60	5.20	.....	6.67	6.50	7.25
Average.....	8.02	8.30	8.41	.....	7.39	6.88	.....	8.08	7.96	¹ 11.10

EAST ST. LOUIS.

1921.										
January.....	\$9.34	\$9.68	\$9.84	\$9.88	\$8.03	\$7.62	\$9.68	\$8.98	\$9.71	\$10.50
February.....	9.16	9.65	9.93	10.00	7.93	7.57	9.62	8.55	9.63	10.85
March.....	9.72	10.39	10.76	10.85	8.22	7.77	10.18	9.43	10.41	11.75
April.....	8.22	8.59	8.84	8.86	6.72	6.30	8.67	8.19	8.72	10.70
May.....	8.19	8.45	8.56	8.54	6.86	6.45	8.23	7.73	8.55	9.30
June.....	8.01	8.25	8.31	8.28	7.05	6.50	8.01	7.71	8.24	9.00
July.....	10.11	10.42	10.56	10.49	8.28	7.81	9.58	8.82	10.49	12.00
August.....	9.59	10.14	10.32	10.09	7.84	7.38	9.23	8.44	10.14	11.80
September.....	8.02	8.59	8.55	8.40	6.37	5.92	7.82	7.18	8.44	9.70
October.....	7.71	8.24	8.25	8.26	6.51	5.96	8.17	7.84	8.23	8.95
November.....	7.00	7.19	7.31	7.48	6.04	5.63	7.67	.....	7.28	8.25
December.....	6.99	7.23	7.40	7.46	5.90	5.48	7.08	.....	7.33	8.40
Average.....	8.50	8.90	9.06	9.05	7.14	6.70	8.67	² 8.29	8.94	¹ 12.00

¹ Top for year.² 10 months' average.

SWINE—Continued.

TABLE 366.—Hogs: Yearly receipts at principal markets, and at all markets, 1900 to 1921.

[In thousands—i. e. 000 omitted.]

Year.	Receipts at principal and other markets. ¹										All other markets.	Total, all markets. ²
	Chicago.	Kansas City.	Omaha.	St. Paul.	East St. Louis.	Fort Worth.	Denver.	Sioux City.	St. Joseph.	Total.		
1900.....	8,109	3,094	2,201	500	1,792	(³)	116	833	1,679	18,324	.....	.....
1901.....	8,290	3,716	2,414	617	1,924	(³)	109	990	2,105	20,135	.....	.....
1902.....	7,805	2,279	2,247	608	1,330	79	87	1,008	1,698	17,291	.....	.....
1903.....	7,326	1,669	2,231	760	1,568	151	147	1,008	1,701	16,861	.....	.....
1904.....	7,230	2,227	2,300	882	1,955	281	162	1,113	1,657	17,816	.....	.....
1905.....	7,726	2,505	2,294	855	2,025	463	191	1,299	1,900	19,232	.....	.....
1906.....	7,275	2,670	2,394	861	1,923	551	193	1,158	1,908	18,939	.....	.....
1907.....	7,201	2,924	2,254	867	2,065	483	241	1,289	1,923	19,252	.....	.....
1908.....	8,131	3,715	2,425	1,133	2,560	703	280	1,381	2,349	22,677	.....	.....
1909.....	6,619	3,093	2,135	725	2,473	808	242	1,077	1,694	18,926	.....	.....
1910.....	5,587	2,085	1,894	836	2,054	541	187	1,044	1,353	15,582	.....	.....
1911.....	7,103	3,168	2,367	911	3,108	550	220	1,349	1,922	20,704	.....	.....
1912.....	7,181	2,523	2,886	984	2,530	383	222	1,098	1,979	20,332	.....	.....
1913.....	7,571	2,568	2,543	1,257	2,584	404	247	1,533	1,809	20,576	.....	.....
1914.....	6,618	2,265	2,259	1,590	2,559	515	256	1,257	1,725	19,044	.....	.....
1915.....	7,652	2,531	2,043	2,155	2,592	464	344	1,701	1,698	21,840	11,373	30,213
1916.....	9,188	2,979	3,117	2,675	3,057	968	467	2,131	2,199	26,781	10,484	43,265
1917.....	7,169	2,277	2,797	1,928	2,706	1,062	352	2,149	1,920	22,360	15,082	38,042
1918.....	8,614	3,328	3,430	2,061	3,256	762	384	2,421	2,351	26,607	18,256	44,863
1919.....	8,672	3,141	3,179	2,190	3,651	588	368	2,322	2,126	26,237	18,232	41,469
1920.....	7,526	2,456	2,708	2,247	3,390	418	341	2,173	1,914	23,187	18,034	42,121
1921.....	8,148	2,205	2,005	2,209	3,330	382	334	1,739	1,785	22,797	18,304	41,101

¹ Prior to 1915, receipts compiled from yearbook of stockyard companies.² Figures not obtainable prior to 1915.³ Not in operation.TABLE 367.—Hogs: Monthly and yearly receipts at Chicago, Kansas City, Omaha, and East St. Louis, combined, 1910 to 1921.¹

[In thousands—i. e., 000 omitted.]

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1910.....	1,179	1,128	934	738	1,057	1,138	892	892	687	768	1,020	1,131	11,614
1911.....	1,270	1,302	1,516	1,304	1,521	1,487	1,200	976	979	1,231	1,533	1,451	15,761
1912.....	1,908	1,612	1,350	1,242	1,381	1,218	1,090	846	703	1,093	1,207	1,380	15,096
1913.....	1,640	1,315	1,170	1,164	1,267	1,328	1,129	1,095	1,081	1,153	1,288	1,655	15,265
1914.....	1,479	1,328	1,182	1,001	1,065	1,167	927	830	826	1,093	1,158	1,640	13,696
1915.....	1,669	1,640	1,511	1,080	1,234	1,222	1,037	921	803	848	1,387	2,000	17,418
1916.....	2,313	1,950	1,510	1,154	1,365	1,283	1,090	1,221	954	1,407	1,936	2,091	18,341
1917.....	2,199	1,697	1,307	1,205	1,320	1,125	1,083	757	545	902	1,286	1,461	14,947
1918.....	1,657	1,888	1,963	1,697	1,464	1,246	1,356	1,047	932	1,376	1,794	2,207	18,627
1919.....	2,418	1,978	1,631	1,571	1,644	1,680	1,314	829	913	1,129	1,435	2,049	18,641
1920.....	2,136	1,357	1,630	1,059	1,636	1,433	1,131	958	798	894	1,381	1,611	16,101
1921.....	1,916	1,708	1,340	1,275	1,340	1,494	1,122	1,092	940	1,092	1,459	1,558	16,348
12-year average.....	1,816	1,575	1,426	1,211	1,361	1,319	1,114	958	851	1,082	1,410	1,692	15,821

¹ Prior to 1915 from yearbooks of stockyard companies.

SWINE—Continued.

TABLE 368.—Hogs: Yearly receipts, local slaughter, and stocker and feeder shipments at public stockyards, 1919-1921.

[In thousands—i. e., 000 omitted.]

Stockyards.	Receipts.			Local slaughter.			Stocker and feeder shipments.		
	1919	1920	1921	1919	1920	1921	1919	1920	1921
Albany, N. Y.	2	2	1	2	2	(1)			
Amarillo, Tex.	2	7	8				(1)	1	
Atlanta, Ga.	83	68	91	37	42	61	4	8	5
Augusta, Ga.	9	7	10	5	5	7	1	(1)	(1)
Baltimore, Md.	963	1,164	1,238	661	874	1,013			
Billings, Mont.	11	1	1	(1)	(1)	(1)	3	(1)	
Birmingham, Ala.	23	24	27	24	24	27			
Boston, Mass.	22	14	8						
Buffalo, N. Y.	1,352	1,494	1,603	730	631	670		(1)	(1)
Chattanooga, Tenn.	14	11	17	13	11	17	1		
Cheyenne, Wyo.	3	10	45						
Chicago, Ill.	8,672	7,526	8,148	7,572	5,870	5,977	14	2	2
Cincinnati, Ohio.	1,671	1,478	1,435	823	789	838	1	3	4
Cleveland, Ohio	1,084	1,012	960	729	610	688			
Columbia, S. C.	6	7	4	6	7	4			
Columbus, Ohio.	52	69	61	4	14	14	1	1	1
Dallas, Tex.	45	56	51	45	56	52			
Dayton, Ohio	109	129	131	61	76	83			
Denver, Colo.	368	341	334	336	310	311	32	31	22
Detroit, Mich.	389	444	359	338	360	269	8	5	5
Dublin, Ga.	3	3	3		(1)		(1)	(1)	(1)
East St. Louis, Ill.	3,630	3,399	3,330	2,231	1,678	1,289	98	47	44
El Paso, Tex.	17	15	29	9	11	14	4	3	15
Emeryville, Calif.	10	16	21	10	16	21			
Erie, Pa.	43	61		16	15				
Evansville, Ind.	255	243	219	31	80	73	10	4	4
Fort Worth, Tex.	588	413	382	464	322	277	55	24	52
Fostoria, Ohio.	79	99	107	10	10	11	3	1	2
Indianapolis, Ind.	2,936	2,897	2,695	1,434	1,359	1,377	41	17	21
Jacksonville, Fla.	78	100	99	66	72	47	1	1	
Jersey City, N. J.	468	629	509	468	629	509			
Kansas City, Mo.	3,140	2,466	2,205	2,600	1,838	1,713	244	200	94
Knoxville, Tenn.	37	42	15	3	2	9	1	(1)	1
Lafayette, Ind.	199	204	166	37	40	44	3	5	7
Lancaster, Pa.	63	185	44	13	11	17			
Logansport, Ind.	16	23	26	1	2	1	(1)	(1)	(1)
Louisville, Ky.	750	428	382	173	156	180	28	11	8
Marion, Ohio.	155	217	95	10	13	16	4	2	2
Memphis, Tenn.	11	30	9	2	1	4	(1)	4	1
Milwaukee, Wis.	585	554	489	534	509	482	(1)		
Montgomery, Ala.	171	109	97	3	5	2	22	15	9
Moultrie, Ga.			42			26			3
Nashville, Tenn.	727	615	436	67	82	113	28	18	2
Nebraska City, Nebr.	298	311	324	271	238	267	(1)		(1)
New Brighton, Minn.	3	7	1				2	4	1
New Orleans, La.	63	63	50	43	45	40	3	3	1
New York, N. Y.	677	755	902	677	755	902			
Ogden, Utah.	104	78	176	67	47	47	13	11	2
Oklahoma, Okla.	470	341	371	360	288	331	43	21	13
Omaha, Nebr.	3,179	2,708	2,665	2,531	1,993	1,971	8	7	4
Orangeburg, S. C.	2			2					
Pasco, Wash.	7	2	2	(1)	(1)				
Peoria, Ill.	390	354	424	153	135	164	(1)	3	8
Philadelphia, Pa.	345	481	485	329	457	457			
Pittsburgh, Pa.	1,779	2,439	2,277	279	413	505			
Portland, Oreg.	205	175	150	103	91	112	15	17	11
Pueblo, Colo.	24	14	5			1		(1)	(1)
Richmond, Va.	156	212	170	154	210	169	1		
St. Joseph, Mo.	2,126	1,914	1,785	1,919	1,584	1,517	27	23	9
St. Paul, Minn.	2,190	2,247	2,209	1,317	1,905	1,668	103	161	104
Salt Lake City, Utah.	53	34	56	39	25	36	4	3	2
San Antonio, Tex.	25	39	70	7	16	33	2	2	4
Seattle, Wash.	126	95	134	124	92	132	2	3	1
Sioux City, Iowa.	2,321	2,173	1,739	1,411	1,296	1,047	33	28	19
Sioux Falls, S. Dak.	174	247	452	(1)	5	57	2	2	3
Spokane, Wash.	60	47	33	42	32	21	15	12	6
Tacoma, Wash.	30	35	59	31	34	58	(1)		
Toledo, Ohio.	232	264	148	53	86	24	2	2	1
Washington, D. C.	72	102	113	71	101	112			
Wichita, Kans.	494	382	369	469	356	348	20	23	13
Total.	44,469	42,121	41,101	30,018	28,761	28,335	902	728	499

1 Less than 500.

SWINE—Continued.

TABLE 369.—Hogs: Monthly and yearly receipts, slaughter, and stocker and feeder shipments at public stockyards, 1921.

[In thousands—i. e., 000 omitted]

Stockyards.	Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Chicago, Ill.:													
Receipts.....	994	816	608	573	583	705	568	532	493	583	768	875	8,148
Local slaughter.....	733	614	419	465	492	564	428	423	390	442	560	427	5,977
Stocker and feeder shipments.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	2
Kansas City, Mo.:													
Receipts.....	228	244	191	187	256	226	125	147	126	142	178	155	2,205
Local slaughter.....	175	183	134	163	216	197	96	108	97	100	132	112	1,713
Stocker and feeder shipments.....	8	11	17	9	7	6	3	5	8	8	6	6	94
Omaha, Nebr.:													
Receipts.....	289	327	280	241	238	287	245	162	128	126	151	191	2,665
Local slaughter.....	230	244	198	153	186	232	177	122	99	94	118	88	1,971
Stocker and feeder shipments.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	.....	4
East St. Louis, Ill.:													
Receipts.....	405	321	267	274	263	276	184	201	199	241	362	337	3,330
Local slaughter.....	186	154	92	94	117	117	64	77	77	80	134	97	1,289
Stocker and feeder shipments.....	3	3	7	8	5	3	2	3	3	1	1	5	44
St. Paul, Minn.:													
Receipts.....	263	236	208	157	176	159	113	107	104	202	267	217	2,209
Local slaughter.....	211	187	161	126	136	128	94	87	88	160	173	117	1,668
Stocker and feeder shipments.....	11	13	15	10	9	6	2	3	7	12	9	7	104
Fort Worth, Tex.:													
Receipts.....	31	37	67	34	30	21	26	33	29	27	20	27	382
Local slaughter.....	20	26	46	23	24	20	21	28	17	18	14	20	277
Stocker and feeder shipments.....	4	6	11	8	3	1	1	2	3	6	2	5	52
Sioux City, Iowa:													
Receipts.....	191	201	169	157	134	181	162	127	103	97	92	125	1,739
Local slaughter.....	121	128	94	99	83	124	95	74	66	61	61	41	1,047
Stocker and feeder shipments.....	2	3	4	2	1	1	1	(1)	1	2	2	1	19
Jersey City, N. J.:													
Receipts.....	65	64	41	41	30	27	25	37	33	59	40	47	509
Local slaughter.....	65	64	41	41	30	27	25	37	33	59	40	47	509
St. Joseph, Mo.:													
Receipts.....	174	178	115	116	140	188	148	126	93	114	173	220	1,785
Local slaughter.....	136	148	91	104	121	173	131	106	78	96	152	181	1,517
Stocker and feeder shipments.....	(1)	1	2	1	(1)	(1)	(1)	(1)	1	1	1	1	9
Indianapolis, Ind.:													
Receipts.....	392	230	162	208	221	259	186	176	214	231	223	193	2,695
Local slaughter.....	165	99	74	102	106	140	100	105	93	110	143	140	1,977
Stocker and feeder shipments.....	1	1	1	2	2	5	1	1	3	2	1	1	21
Buffalo, N. Y.:													
Receipts.....	204	139	121	127	131	113	91	102	123	164	141	147	1,603
Local slaughter.....	100	30	50	56	57	51	46	43	56	59	63	59	670
Stocker and feeder shipments.....	.....	.....	.....	(1)	.....	.....	(1)	.....	.....	.....	.....	.....	(1)
Pittsburgh, Pa.:													
Receipts.....	251	175	156	160	151	150	131	136	132	261	241	283	2,277
Local slaughter.....	55	40	37	35	36	35	34	35	39	52	51	56	505
Denver, Colo.:													
Receipts.....	26	39	35	27	37	36	25	20	14	20	23	22	334
Local slaughter.....	32	36	34	25	35	34	27	19	13	17	22	17	311
Stocker and feeder shipments.....	5	2	2	1	1	1	1	1	1	2	1	4	22
Cincinnati, Ohio:													
Receipts.....	152	111	96	112	123	134	98	93	113	120	142	141	1,435
Local slaughter.....	89	74	64	66	78	88	61	53	66	71	93	95	893
Stocker and feeder shipments.....	(1)	(1)	1	1	(1)	(1)	(1)	1	(1)	(1)	.....	.....	4
Oklahoma, Okla.:													
Receipts.....	25	30	59	46	48	32	21	26	28	16	18	22	371
Local slaughter.....	21	25	60	41	44	29	19	23	25	12	14	18	331
Stocker and feeder shipments.....	1	1	2	1	1	1	1	(1)	1	1	3	(1)	13
Cleveland, Ohio:													
Receipts.....	98	72	69	75	77	100	63	60	84	81	89	89	960
Local slaughter.....	77	55	49	50	56	83	46	40	57	50	62	63	688

1 Less than 500.

SWINE—Continued.

TABLE 370.—Hogs: Monthly average weight, 1921, and 12-year average, at Chicago, Kansas City, Omaha, and East St. Louis.

Market.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Chicago:												
1921.....	234	234	241	242	239	241	250	259	262	243	225	226
12-year average, 1910-1921.....	219	224	230	233	235	236	241	245	241	226	216	216
Kansas City:												
1921.....	236	236	233	229	224	211	223	225	216	222	216	223
12-year average, 1910-1921.....	207	209	208	210	206	202	203	200	196	193	195	200
Omaha:												
1921.....	245	246	252	250	250	255	260	274	233	274	244	232
12-year average, 1910-1921.....	232	233	239	243	245	245	249	255	265	262	249	235
East St. Louis:												
1921.....	211	210	200	198	198	201	204	206	196	196	205	207
12-year average, 1910-1921.....	181	181	179	180	182	185	183	184	185	179	182	179

TABLE 371.—Hogs: Corn and hog ratios, based on average farm price per 100 pounds of live hogs, divided by average farm price of 1 bushel of corn, 1910 to 1921.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average.
1910.....	12.2	12.0	13.6	14.4	13.3	12.9	12.2	11.7	13.0	14.2	15.1	14.9	13.3
1911.....	15.3	14.4	13.7	12.1	10.7	9.8	9.4	9.9	9.9	9.3	9.3	9.2	11.1
1912.....	9.1	8.8	8.6	9.0	8.4	8.1	8.3	9.1	10.1	12.0	13.2	14.1	9.9
1913.....	13.6	13.9	14.4	14.4	12.7	12.3	12.1	11.1	10.2	10.4	10.5	10.3	12.2
1914.....	10.8	11.3	11.2	10.9	10.3	9.9	10.1	10.3	10.3	10.0	10.4	10.2	10.5
1915.....	9.5	8.6	8.4	8.5	8.7	8.7	8.7	8.5	9.2	10.8	10.6	10.1	9.2
1916.....	9.8	10.5	11.4	11.5	11.4	11.0	10.9	10.6	11.1	10.4	10.1	9.8	10.7
1917.....	9.9	10.5	11.5	10.3	8.8	8.3	7.4	7.7	9.0	10.1	11.2	12.0	9.7
1918.....	11.2	10.3	10.1	10.2	10.3	10.0	9.9	10.1	10.8	11.0	11.5	11.3	10.6
1919.....	11.1	11.3	11.2	11.1	10.8	10.2	10.5	10.2	9.3	9.7	9.2	9.2	10.3
1920.....	9.3	9.2	8.9	8.4	7.6	7.1	7.8	8.5	10.1	13.0	15.0	13.2	9.8
1921.....	13.5	13.5	14.3	13.0	12.5	11.6	13.1	14.8	14.0	15.9	16.0	15.2	14.0
12-year average.....	11.3	11.2	11.4	11.2	10.5	10.0	10.0	10.2	10.6	11.4	11.8	11.6	10.9

TABLE 372.—Pork, fresh, chilled, and frozen: Yearly exports and imports, by principal countries.

[In thousands of pounds—i. e. 000 omitted.]

EXPORTS.

Country.	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
<i>Exported by—</i>											
Argentina.....	2				736	1,969	2,965	1,684	2,269	9,915	(1)
Australia ²	741	1,641	398	213	49	8	33	263	840	371	(1)
Belgium.....	3,266	3,936	2,332	1,927						(3)	10
Brazil.....										1,852	3,395
British South Africa.....		15	48	14	19	42	55		55	122	250
Canada.....			267	876	17,045	15,198	12,904	12,067	135,783	2,379	1,576
Denmark.....	1,337	3,461	14,316	4,342	2,682	33,443	29,919	15,985	79	622	(3)
France.....	6,573	1,187	1,296	1,492	1,286	105	105	720	338	593	366
Netherlands.....	52,112	64,465	55,424	79,111	109,901	97,887	34,694	6,475	(2)	8,593	3,427
New Zealand.....	1,229	1,223	128	282	163	713	688	1,655		(1)	2
Russia.....	7,067	5,988	9,031	8,276	5,899	4,453	1,011		(1)	(1)	(1)
Sweden.....	489		14,125	4,780	7,662	15,274	20,461	7,443	1	(3)	(3)
United States.....	927	2,232	2,608	3,153	1,251	24,230	55,112	49,373	11,633	26,777	38,305
Uruguay.....								26	391	(1)	(1)

¹ Not yet available.

² Year beginning July 1.

³ Less than 500 pounds.

⁴ Unclassified.

⁵ Not separately stated.

SWINE—Continued.

TABLE 372.—Pork, fresh, chilled, and frozen: Yearly exports and imports, by principal countries—Continued.

[In thousands of pounds—i. e., 000 omitted.]

IMPORTS.

Country.	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
<i>Imported by—</i>											
Austria-Hungary.....	7	3,885	6,964	2,404							
Belgium.....	932	459	38	27						63	274
Canada.....	251	645	496	380	64	9,063	57,533	101,223	1,564	44,937	11,977
Cuba.....	148	107	88	123	186	216	107	158	316	564	(1)
Denmark.....	134	1,263	1,830	1,794	4,654	714					(5)
France.....	54	15,187	10,794	3,208	2,189	91	2,184	9,848	10,222	18,889	6,803
Germany.....	8,211	3,129	29,123	35,875							14,445
Netherlands.....	42	49	2,321	101	47	60	2	6	1	10	189
Sweden.....			1	4	2	11	43	902	12	(5)	(5)
Switzerland.....	3,926	14,606	22,172	12,606	7,545	55	4	1	2	67	4,764
United Kingdom.....	53,750	50,728	35,027	55,358	96,455	30,162	32,847	18,015	11,150	15,253	56,245
United States.....				259	18,932	3,495	955	2,550	1,722	2,779	1,541

¹ Not yet available.⁵ Not separately stated.

MEATS AND LARD.

TABLE 373.—Fresh and smoked meats: Monthly average wholesale price per 100 pounds, Chicago and New York, 1921.

CHICAGO.

Class of meat.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average.
Beef:													
Steer—													
Choice.....	\$20.90	\$17.33	\$18.86	\$18.10	\$17.25	\$16.64	\$16.50	\$17.17	\$17.13	\$18.31	\$18.34	\$18.08	\$17.89
Good.....	18.43	15.20	17.06	16.65	15.94	15.22	15.10	15.74	16.20	16.65	16.49	16.48	16.26
Medium.....	16.38	13.80	14.62	14.85	14.76	14.02	13.54	12.99	13.04	13.30	13.00	13.98	14.02
Common.....	13.43	11.83	12.55	13.00	13.43	12.02	11.55	10.51	9.89	9.76	9.50	10.75	11.48
Cow—													
Good.....	14.63	12.33	13.75	14.39	13.95	12.95	12.85	12.36	11.64	11.86	11.50	11.50	12.81
Medium.....	12.30	11.13	12.06	13.10	12.84	11.88	11.38	11.23	10.36	10.23	9.50	10.25	11.36
Common.....	11.30	10.13	10.82	11.30	10.95	10.04	10.00	9.45	8.31	8.26	7.50	8.25	9.69
Bull—Common.....	10.75	9.69	10.37	9.80	10.48	8.81	9.32	8.61	8.05	7.73	7.00	7.26	8.99
Veal:													
Choice.....	20.10	18.96	19.82	17.55	17.13	16.26	18.18	17.72	20.41	19.10	16.61	15.71	18.15
Good.....	18.35	17.90	18.43	15.85	15.78	15.26	16.60	15.52	18.60	16.58	15.19	13.71	16.48
Medium.....	16.60	15.90	16.40	14.10	13.83	13.26	14.60	12.70	15.43	13.35	13.23	12.71	14.34
Common.....	13.30	13.20	13.64	11.43	11.03	10.76	12.18	10.00	11.93	9.55	10.93	10.54	11.54
Lamb and Mutton.													
Lamb—													
Choice.....	24.20	19.24	21.92	21.25	23.95	23.60	25.68	23.02	19.70	17.55	19.16	23.80	21.95
Good.....	22.05	17.26	19.28	18.75	21.53	20.82	23.50	20.46	17.70	16.25	17.86	21.62	19.76
Medium.....	19.18	15.50	17.26	16.25	19.03	18.06	20.68	18.22	15.45	14.08	15.36	19.58	17.39
Common.....	15.78	13.18	14.68	13.75	15.78	14.32	17.28	15.50	11.93	11.28	12.06	17.08	14.38
Yearling—													
Good.....	18.50	14.80	14.66	15.50	16.00								115.89
Medium.....	16.50	13.40	13.50	13.50	14.00								114.18
Common.....	14.50	11.63	11.50	11.50	12.00								112.23
Mutton—													
Good.....	11.05	9.85	13.72	14.43	15.05	12.98	12.18	12.26	10.53	10.20	9.83	11.05	11.93
Medium.....	9.00	8.53	11.42	12.30	13.05	10.98	9.95	10.34	9.05	8.25	8.66	10.05	10.13
Common.....	7.50	7.45	9.44	9.90	10.55	8.46	7.45	7.84	6.90	6.40	5.82	7.42	7.93
Fresh pork cuts:													
Loins—													
8-10 pounds.....	22.45	20.02	25.78	27.20	21.55	20.09	22.78	29.00	28.31	25.03	17.10	18.25	23.13
10-12 pounds.....	21.05	18.60	24.44	25.18	19.68	18.86	21.11	26.88	25.59	22.33	16.13	17.01	21.40
12-14 pounds.....	19.40	17.23	22.28	23.00	18.18	17.69	19.69	23.26	21.95	19.33	15.11	16.11	19.44
14-16 pounds.....	17.63	16.11	19.90	20.58	16.55	16.54	18.09	20.10	18.70	17.28	14.11	15.09	17.55
16 pounds over.....		14.88	17.80	17.53	14.45	15.41	16.66	16.66	15.46	14.55	13.08	14.19	15.52
Shoulders—													
Skinned.....	15.38	13.99	15.62	14.90	12.85	12.87	13.05	14.96	14.91	13.43	11.69	12.71	13.86
Picnics—													
4-8 pounds.....	14.30	13.70	14.14	12.85	11.45	12.69	14.23	13.91	12.18	11.01	11.01	11.56	12.75
6-8 pounds.....	13.20	12.70	13.14	11.35	9.50	11.95	13.53	12.94	11.33	10.31	9.90	10.76	11.72
8 pounds over.....	12.20												
Butts, Boston style	17.90	15.61	18.12	17.28	14.13	14.39	15.15	18.52	18.58	16.08	13.42	14.88	

¹ Five months average.² Fourteen n pounds over prior to February, 1921.⁵ Eleven months average.

MEATS AND LARD—Continued.

TABLE 373.—Fresh and smoked meats: Monthly average wholesale price per 100 pounds, Chicago and New York, 1921—Continued.

CHICAGO—Continued.

Class of meat.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average.
Cured pork cuts:													
Hams, smoked (14-16 average).....	\$24.25	\$25.63	\$25.50	\$25.38	\$25.16	\$25.60	\$29.44	\$29.50	\$25.56	\$22.19	\$21.38	\$21.22	\$25.07
Shoulders, picnics, smoked.....	17.85	17.38	16.73	15.94	15.35	16.53	17.91	17.45	14.25	13.63	15.95	16.66	16.30
Bacon, breakfast.....	26.25	27.81	27.80	27.38	25.69	25.53	26.44	27.30	24.88	22.50	21.80	20.56	25.33
Lard (tierces).....	16.03	14.91	14.48	13.07	11.88	12.03	13.94	13.65	13.51	12.16	11.62	11.25	13.21
Lard compound (tierces).....	12.38	11.69	10.63	9.31	9.63	9.70	11.00	11.73	12.28	12.13	11.30	10.94	11.06

NEW YORK.

Beef:													
Steer—													
Choice.....				\$18.60	\$16.97	\$16.84	\$16.80	\$18.33	\$17.94	\$18.40	\$18.47	\$18.85	\$17.92
Good.....	\$17.36	\$14.45	\$17.08	17.04	15.64	15.56	15.25	15.85	15.34	15.05	14.34	14.92	15.66
Medium.....	16.00	13.36	16.01	15.94	14.71	14.42	13.35	13.40	13.03	12.64	12.00	12.95	13.98
Common.....		12.71	15.00	14.81	13.16	12.17	11.03	10.35	10.62	9.92	9.70	11.32	\$11.89
Cow—													
Good.....	14.36		14.40	14.63	13.39	12.84	12.75	12.42	11.25	10.50	9.52	11.38	\$12.49
Medium.....	13.35	10.76	13.59	13.68	12.40	11.82	11.14	10.52	9.75	9.50	8.73	10.36	11.30
Common.....	12.48		12.51			10.48	9.82	9.04	8.47	8.56	8.11	8.78	9.81
Bull—													
Good.....			12.39	11.36		11.94							
Medium.....	13.18	10.22	11.02	9.95	11.42	10.28							\$11.01
Common.....	11.89	9.44	10.23	9.56	10.59	8.87	16.17	8.74	8.40	8.21	6.87	9.17	9.34
Veal:													
Choice.....	27.25	22.12	21.58			18.48	18.58	20.08	24.50	21.80	18.23	21.65	\$21.43
Good.....	23.63	19.85	19.74	17.75	16.30	16.34	15.95	16.88	20.85	19.18	16.40	17.98	18.40
Medium.....	20.63	14.73	17.21	15.38	14.58	15.17	13.85	14.12	16.95	16.32	14.11	16.25	15.73
Common.....	16.30	15.03	14.38	12.83	12.47	12.90	11.68	11.28	12.96	11.80	10.69	13.03	12.95
Lamb and mutton.													
Lamb—													
Choice.....	25.78	20.33	22.40	22.75	25.98	26.88	25.75	23.34	20.73	19.24	21.26	26.65	23.42
Good.....	24.53	18.58	20.68	20.65	24.23	24.53	23.53	21.26	19.00	17.90	19.70	24.98	21.64
Medium.....	22.33	16.72	18.48	18.88	22.05	21.88	20.94	19.12	16.75	16.05	17.31	22.85	19.45
Common.....						17.14	15.79	14.44	12.40	12.92		20.37	\$15.51
Mutton—													
Good.....	13.40	10.97	12.82	15.26	15.55	12.84	15.40	12.28	12.01	11.25	10.33	13.30	12.95
Medium.....	12.03	9.65	11.40	13.38	14.28	10.12	12.36	10.56	10.50	10.60	9.17	11.80	11.25
Common.....	10.05	8.49	10.18	10.94	10.87	6.86	9.20	7.78	7.55	7.61	6.74	8.47	8.73
Fresh pork cuts:													
Loins—													
8-10 pounds.....	25.73	21.65	24.32	27.58	22.98	22.09	23.69	27.98	29.21	27.70	19.23	19.63	24.32
10-12 pounds.....	24.18	20.22	22.58	25.55	21.28	20.78	21.71	25.82	27.20	25.75	18.24	18.55	22.66
12-14 pounds.....	22.98	19.06	21.16	24.08	19.90	19.18	20.30	23.12	23.92	23.40	17.38	17.66	21.01
14-16 pounds.....	\$20.75	18.00	19.68	21.68	18.35	18.02	18.70	20.04	19.94	20.10	16.88	16.59	\$18.91
16 pounds over.....		16.66	18.24	19.48	17.13	16.58	17.40	17.38	16.92	17.42	15.62	15.49	\$17.12
Shoulders—													
Skinned.....	16.33	15.00	15.77	15.84	13.66	13.40	13.35	15.96	15.05	14.99	13.41	14.02	14.73
Picnics—													
4-6 pounds.....													
6-8 pounds.....	14.20	13.84	14.26	13.83	11.86	11.82	11.90	13.38	11.86	12.25	11.60	11.99	\$12.73
8 pounds over.....													
Butts—													
Boneless.....	23.38	19.20		23.55		19.84							
Boston style.....	20.15	17.10	18.23	18.33	15.60	14.79	15.12	17.33	15.82	18.96	16.42	15.55	\$17.20
Cured pork cuts:													
Hams, smoked (10-12 average).....	24.63	28.00	27.60	27.68	25.50	25.60	28.50	31.86	26.50	23.00	22.00	22.38	26.10
Shoulders, picnics, smoked.....	19.88	17.25	16.60	16.25	15.00	15.40	16.25	17.72	15.25	14.00	14.00	14.00	15.97
Bacon, breakfast.....	29.13	30.25	30.00	30.00	29.59	28.05	28.00	29.56	27.00	24.00	24.00	24.00	27.79
Lard (tierces).....	14.13	15.13	13.90	13.50	12.44	12.45	13.13	13.58	13.88	12.75	12.45	11.25	13.22
Lard compound (tierces).....	11.50	11.75	10.63	9.50	8.75	8.95	9.88	11.20	11.72	12.25	11.95	10.75	10.74

2 Fourteen pounds over prior to February, 1921.

3 Eleven months average.

4 Nine months average.

5 Six months average.

6 Ten months average.

MEATS AND LARD—Continued.

TABLE 374.—Cold-storage holdings of frozen and cured meats, 1917 to 1921.

[In thousands of pounds—i. e., 000 omitted.]

Year.	January 1.	February 1.	March 1.	April 1.	May 1.	June 1.
1917.....	803,669	875,450	913,659	851,990	827,951	831,867
1918.....	981,378	1,117,965	1,265,554	1,354,961	1,319,328	1,299,779
1919.....	1,199,292	1,452,312	1,436,378	1,383,764	1,332,443	1,283,768
1920.....	1,015,558	1,186,530	1,278,729	1,304,142	1,251,508	1,208,728
1921.....	820,245	976,058	1,138,033	1,107,706	1,042,552	1,017,209

Year.	July 1.	August 1.	September 1.	October 1.	November 1.	December 1.
1917.....	878,598	893,472	778,119	632,802	587,245	709,043
1918.....	1,149,377	1,136,501	1,035,861	905,326	832,230	938,066
1919.....	1,254,457	1,171,881	1,061,274	984,259	880,719	865,101
1920.....	1,194,464	1,115,082	977,225	783,777	670,295	653,636
1921.....	989,402	899,406	776,981	607,455	490,648	504,659

TABLE 375.—Lard, pure: Monthly and yearly average price per 100 pounds, Chicago, 1910 to 1921.¹

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average.
1910.....	\$12.43	\$12.50	\$14.08	\$12.33	\$12.95	\$12.27	\$11.85	\$11.82	\$12.44	\$12.93	\$10.82	\$10.31	\$12.23
1911.....	10.32	9.50	8.83	7.93	8.03	8.17	8.30	8.97	9.32	8.85	9.07	9.00	8.80
1912.....	9.24	8.90	9.37	10.06	10.77	10.87	10.57	10.73	11.08	11.47	11.15	10.46	10.39
1913.....	9.88	10.50	10.66	11.00	11.05	10.99	11.53	11.28	11.15	10.60	10.63	10.68	10.33
1914.....	10.89	10.67	10.52	10.23	9.95	10.03	10.08	9.69	9.68	10.22	10.89	10.05	10.24
1915.....	10.69	10.53	9.84	9.95	9.71	9.39	8.05	7.92	8.13	9.07	8.94	9.47	9.31
1916.....	10.32	9.99	10.79	11.77	12.80	12.87	13.12	13.44	14.47	15.34	16.91	16.66	13.21
1917.....	15.66	17.00	19.30	21.00	22.30	21.41	20.77	22.40	24.03	24.28	27.13	25.46	21.73
1918.....	24.39	26.05	26.07	25.44	24.53	24.50	26.09	26.78	26.98	26.66	26.69	25.31	25.79
1919.....	23.46	24.83	27.35	30.09	33.58	34.15	34.76	30.01	28.19	27.41	25.86	23.11	28.40
1920.....	23.52	23.14	22.93	22.71	22.75	22.98	21.71	21.16	22.53	23.28	22.07	13.15	22.35
1921.....	16.03	14.91	14.48	13.07	11.88	12.03	13.94	13.65	13.51	12.16	11.62	11.25	13.21
12-year average....	14.74	14.88	15.35	15.47	15.86	15.80	15.90	15.65	15.80	16.02	15.98	14.99	15.54

¹ Prior to February, 1920, from National Provisioner.

TABLE 376.—Cold-storage holdings of lard, 1916 to 1921.

[In thousands of pounds—i. e., 000 omitted.]

Year.	Jan. 1.	Feb. 1.	Mar. 1.	Apr. 1.	May 1.	June 1.	July 1.	Aug. 1.	Sept. 1.	Oct. 1.	Nov. 1.	Dec. 1.
1916.....	63,304	92,342	111,897	97,237	108,731	85,113	87,127	95,991	82,028	71,570	56,929	58,950
1917.....	80,977	85,208	88,460	65,179	61,640	72,365	95,197	112,249	102,172	69,929	37,095	44,367
1918.....	54,539	59,310	65,355	89,854	103,373	106,194	107,871	102,411	104,668	90,398	76,124	81,670
1919.....	104,274	138,353	125,410	112,469	112,409	83,096	92,132	100,478	87,947	76,456	68,036	49,147
1920.....	62,614	97,649	111,975	132,993	141,819	152,307	193,316	191,531	170,774	109,253	47,329	36,683
1921.....	59,319	83,549	117,690	128,614	152,428	181,992	204,301	194,490	149,886	85,115	48,850	42,001

- LIVE-STOCK VALUES.

TABLE 377.—Aggregate live-stock value comparisons.

[Farm values Jan. 1, in millions of dollars; i. e., 000,000 omitted; States arranged according to 1922 rank in value of all animals.]

State.	Cattle, hogs, and sheep.			Horses and mules.			Total (cattle, hogs, sheep, horses, and mules).			Rank in aggregate value.	
	1921	1922	Average, 1916-1920.	1921	1922	Average, 1916-1920.	1921	1922	Average, 1916-1920.	1921	1922
Iowa.....	356	238	438	120	99	162	476	337	600	1	1
Texas.....	293	184	298	169	131	186	462	315	484	2	2
Illinois.....	224	147	251	121	95	164	345	242	415	3	3
Wisconsin.....	205	151	224	72	61	82	277	212	306	4	4
Ohio.....	176	124	201	89	81	103	265	205	304	5	5
Minnesota.....	162	128	191	79	70	96	261	198	287	7	6
New York.....	153	134	178	69	62	83	222	196	261	10	7
Nebraska.....	158	133	248	75	60	105	263	193	353	6	8
Missouri.....	160	120	214	101	70	133	281	190	347	13	9
Kansas.....	148	109	211	93	67	136	241	176	347	8	10
Indiana.....	152	104	164	78	65	97	230	169	261	9	11
Pennsylvania.....	131	98	150	68	62	78	199	160	208	12	12
California.....	155	119	152	45	36	51	200	155	203	11	13
Michigan.....	116	81	131	59	56	76	175	137	207	14	14
South Dakota.....	120	80	142	50	39	71	170	119	213	15	15
Oklahoma.....	83	58	108	73	54	96	156	112	204	16	16
Tennessee.....	67	40	66	67	53	75	134	93	141	19	17
Kentucky.....	69	43	78	65	49	71	134	92	149	18	18
Colorado.....	85	64	108	29	25	38	114	89	146	21	19
Georgia.....	70	41	72	73	47	81	143	88	153	17	20
North Dakota.....	58	42	68	53	45	83	111	87	151	22	21
North Carolina.....	51	36	49	61	51	62	115	87	111	20	22
Montana.....	65	55	100	34	29	41	99	84	144	26	23
Mississippi.....	55	34	60	55	42	63	110	76	123	23	24
Virginia.....	59	39	61	43	35	46	102	74	107	24	25
Arkansas.....	47	30	53	53	40	59	100	70	112	25	26
Alabama.....	46	31	58	46	38	58	92	69	116	27	27
Oregon.....	58	43	68	24	22	28	82	65	96	29	28
Idaho.....	49	41	66	20	18	24	69	59	90	32	29
Louisiana.....	38	25	46	41	34	40	79	59	86	30	30
South Carolina.....	36	21	32	52	35	50	88	56	82	28	31
Washington.....	40	33	39	26	22	32	66	55	71	34	32
New Mexico.....	62	41	81	12	10	16	74	51	97	31	33
Wyoming.....	51	40	92	9	8	16	60	48	108	35	34
Arizona.....	55	37	58	14	10	11	69	47	69	33	35
West Virginia.....	38	26	43	19	16	22	57	42	65	36	36
Utah.....	34	29	48	10	9	12	44	38	60	38	37
Maryland.....	26	19	25	18	16	21	44	35	46	39	38
Florida.....	33	23	36	12	11	13	45	34	49	37	39
Vermont.....	27	22	29	10	8	12	37	30	41	40	40
New Jersey.....	21	16	21	11	11	14	32	27	35	41	41
Maine.....	17	13	19	14	12	16	31	25	35	42	42
Massachusetts.....	21	17	20	7	7	9	28	24	29	43	43
Nevada.....	23	18	38	3	2	5	26	20	43	44	44
Connecticut.....	15	12	15	5	5	7	20	17	22	45	45
New Hampshire.....	11	9	12	5	4	6	16	13	18	46	46
Delaware.....	4	3	4	3	3	4	7	6	8	47	47
Rhode Island.....	3	3	3	1	1	1	4	4	4	48	48
Total.....	4,199	2,954	4,849	2,256	1,826	2,758	6,455	4,780	7,607	.....	.....

LIVE-STOCK PRICES.

TABLE 378.—Farm prices of live stock, by ages or classes, United States, 1916-1922.

Classes.	1916	1917	1918	1919	1920	1921	1922
Horses:							
Under 1 year old.....	\$44 30	\$45 17	\$45.20	\$42.62	\$37.22	\$31.57	\$26.28
1 and under 2 years.....	69.02	70.21	70 21	65 94	58.88	49.72	41 19
2 years and over.....	111 28	112.64	114.30	108.17	103.53	90.70	75.97
Mules:							
Under 1 year old.....	51 47	53 98	57.61	59.14	60 12	47.49	35 18
1 and under 2 years.....	76.69	80 28	86 32	89.14	90 48	71.76	53.10
2 years and over.....	123 59	128.17	139.88	147.65	160.54	126.39	95.54
Other cattle (than milk):							
Under 1 year.....	19.08	20.71	23 44	24.97	24.50	17.42	13.43
1 and under 2 years.....	31.48	33.93	38.63	41.74	40.69	29.01	22.32
2 years and over.....	45 81	48.63	55.62	60.41	59.66	43.72	32.65
Sheep:							
Under 1 year.....	4, 13	5.63	9 06	8.82	8.06	5.34	4.23
Ewes 1 year and over.....	5.35	7.48	12.70	12 44	11.03	6.37	4.84
Wethers 1 year and over.....	5 02	6 78	11 26	11.02	9 60	5.93	4 07
Rams.....	10 32	13.62	20.84	21.90	21.63	15 10	11.36

LIVE-STOCK MARKETINGS.

TABLE 379.—Yearly marketings of live stock at principal markets, 1900-1921.

The combined receipts and shipments of cattle, hogs, and sheep at Chicago, Kansas City, Omaha, St. Louis, Sioux City, St. Joseph, and St. Paul yearly since 1900 were as follows:

Year.	Cattle.		Hogs.		Sheep.	
	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.
1900.....	7, 179, 344	3, 793, 308	18, 573, 177	5, 336, 826	7, 061, 466	2, 500, 686
1901.....	7, 708, 889	3, 888, 460	28, 389, 864	5, 772, 717	7, 798, 359	2, 712, 866
1902.....	8, 375, 408	4, 282, 705	17, 289, 427	4, 130, 675	9, 177, 050	3, 561, 060
1903.....	8, 878, 789	4, 480, 748	16, 780, 250	4, 233, 572	9, 680, 692	3, 983, 310
1904.....	8, 090, 099	4, 552, 554	17, 778, 827	5, 254, 545	9, 604, 812	4, 203, 834
1905.....	9, 202, 083	4, 964, 753	18, 988, 933	5, 614, 306	10, 572, 259	4, 725, 872
1906.....	9, 373, 825	5, 026, 689	19, 223, 792	5, 440, 333	10, 864, 437	5, 046, 866
1907.....	9, 590, 710	5, 360, 790	19, 544, 617	5, 993, 009	9, 857, 877	4, 549, 000
1908.....	8, 827, 880	4, 936, 731	22, 863, 701	7, 288, 403	9, 833, 640	4, 489, 295
1909.....	9, 189, 312	5, 181, 446	18, 420, 012	6, 381, 667	10, 284, 558	4, 172, 383
1910.....	9, 116, 687	5, 122, 984	14, 853, 472	4, 623, 760	12, 366, 375	6, 013, 215
1911.....	8, 629, 199	4, 805, 766	19, 926, 547	6, 418, 246	13, 521, 492	5, 891, 034
1912.....	8, 061, 494	4, 318, 648	19, 771, 825	6, 006, 906	13, 733, 980	5, 369, 402
1913.....	7, 904, 552	4, 596, 085	19, 924, 331	6, 414, 815	14, 037, 830	6, 046, 260
1914.....	7, 182, 239	3, 933, 663	18, 272, 091	5, 816, 069	13, 272, 491	5, 331, 449
1915.....	7, 963, 591	3, 944, 152	21, 031, 405	6, 823, 983	11, 160, 246	4, 370, 504
1916.....	9, 319, 851	4, 713, 700	25, 345, 802	8, 264, 752	11, 639, 022	4, 640, 615
1917.....	11, 241, 038	5, 676, 015	20, 945, 301	5, 173, 567	10, 017, 353	3, 648, 937
1918.....	12, 936, 068	6, 596, 074	25, 461, 514	5, 368, 431	12, 064, 416	4, 769, 595
1919.....	12, 131, 620	5, 256, 392	25, 280, 245	6, 041, 663	14, 307, 603	5, 701, 848
1920.....	9, 969, 911	4, 581, 771	22, 433, 301	6, 304, 630	11, 117, 479	4, 157, 730
1921.....	8, 675, 963	4, 104, 494	22, 080, 870	6, 841, 880	11, 755, 676	3, 610, 311

Figures for 1900-1909, inclusive, were taken from the Monthly Summary of Commerce and Finance of the United States; 1910 and subsequently from official reports of the stockyards in the cities mentioned.

The receipts of calves (not included in "Cattle") at the stockyards of Chicago, Kansas City, St. Joseph, St. Paul, and Sioux City, combined, were about 1,633,196 in 1921, 1,645,958 in 1920, 1,589,491 in 1919, 1,361,787 in 1918, 1,180,063, in 1917, 918,778 in 1916, 726,145 in 1915, 664,000 in 1914, 741,000 in 1913, about 910,000 in 1912, 975,000 in 1911, 981,000 in 1910, and 869,000 in 1909.

THE FEDERAL MEAT INSPECTION.

Some of the principal facts connected with the Federal meat inspection as administered by the Bureau of Animal Industry are shown in the following tables. The figures cover the annual totals beginning with the fiscal year 1907, which was the first year of operations under the meat-inspection law now in force. The data given comprise the number of establishments at which inspection is conducted; the number of animals of each species inspected at slaughter; the number of each species condemned, both wholly and in part, and the percentage condemned of each species and of all animals, the quantity of meat products prepared or processed under Federal supervision, and the quantity and percentage of the latter condemned.

Further details of the Federal meat inspection are published each year in the annual report of the Chief of the Bureau of Animal Industry.

TABLE 380.—*Number of establishments inspected and total number of animals slaughtered under Federal inspection annually, 1907 to 1921.*

Year ended June 30—	Estab-lish-ments.	Cattle.	Calves.	Swine.	Sheep.	Goats.	All animals.
1907.....	708	7,621,717	1,763,574	31,815,900	9,681,876	52,149	50,935,216
1908.....	787	7,116,275	1,995,487	35,113,077	9,702,545	45,953	53,973,337
1909.....	876	7,325,337	2,046,711	35,427,931	10,802,903	69,193	55,672,075
1910.....	919	7,962,189	2,295,099	27,656,021	11,149,937	115,811	49,179,057
1911.....	936	7,781,030	2,219,908	29,916,363	13,005,502	54,145	52,976,948
1912.....	940	7,532,005	2,242,929	34,966,373	14,208,724	63,983	59,014,019
1913.....	910	7,155,316	2,098,484	32,287,538	14,724,465	56,556	56,322,859
1914.....	893	6,724,117	1,814,904	33,289,705	14,958,834	121,827	56,909,387
1915.....	896	6,964,402	1,735,902	36,247,953	12,909,089	165,533	58,022,884
1916.....	875	7,404,288	2,048,022	40,482,799	11,985,926	180,356	62,101,391
1917.....	833	9,299,489	2,679,745	40,210,547	11,343,418	174,649	63,708,148
1918.....	884	10,938,287	3,323,077	35,449,247	8,769,498	149,503	58,629,612
1919.....	895	11,241,991	3,674,227	44,398,389	11,268,370	125,660	70,708,637
1920.....	897	9,709,819	4,227,558	38,981,914	12,334,827	77,270	¹ 65,332,477
1921.....	892	8,179,572	3,896,207	37,702,866	12,452,435	20,027	¹ 62,252,442

¹ Including 1,089 horses slaughtered in 1920 and 1,335 in 1921.

TABLE 381.—*Condemnations of animals at slaughter, 1907-1921.*

Year ended June 30—	Cattle.			Calves.			Swine.		
	Whole.	Part.	Per cent. ¹	Whole.	Part.	Per cent. ¹	Whole.	Part.	Per cent. ¹
1907.....	27,933	93,174	1.58	6,414	245	0.38	105,879	436,161	1.70
1908.....	33,216	67,482	1.41	5,554	396	.31	127,933	636,589	2.18
1909.....	35,103	99,739	1.84	8,213	409	.42	86,912	799,300	2.50
1910.....	42,426	122,167	2.07	7,524	500	.35	52,439	726,829	2.82
1911.....	39,402	123,969	2.10	7,654	781	.38	59,477	877,528	3.13
1912.....	50,363	134,783	2.46	8,927	1,212	.45	129,002	323,992	1.30
1913.....	50,775	130,139	2.53	9,216	1,377	.50	173,037	373,993	1.70
1914.....	48,356	138,085	2.77	6,696	1,234	.44	204,942	422,275	1.88
1915.....	52,496	178,409	3.32	5,941	1,750	.44	213,905	464,217	1.87
1916.....	57,579	188,915	3.33	6,681	1,988	.42	195,107	546,290	1.83
1917.....	78,706	249,637	3.53	10,112	2,927	.49	158,480	528,288	1.71
1918.....	68,156	176,940	2.26	8,109	2,308	.31	113,079	347,006	1.30
1919.....	59,549	166,791	2.01	9,202	2,479	.32	128,805	433,433	1.27
1920.....	58,602	194,058	2.60	13,820	2,866	.39	133,476	550,580	1.75
1921.....	46,854	176,762	2.73	7,703	2,323	.26	122,609	492,132	1.63
Average:									
1907-1910.....	34,670	95,640	1.74	7,001	338	.36	93,291	649,720	2.29
1911-1915.....	48,278	141,077	2.62	7,687	1,271	.44	156,253	492,401	1.95
1916-1920.....	64,518	195,668	2.68	9,585	2,514	.38	145,789	481,199	1.57

¹ Includes both whole and parts. It should be understood that the parts here recorded are primal parts; a much larger number of less important parts, especially in swine, are condemned in addition.

TABLE 381.—*Condemnations of animals at slaughter, 1907-1921—Continued.*

Year ended June 30—	Sheep.			Goats.			All animals.		
	Whole.	Part.	Per cent. ¹	Whole.	Part.	Per cent. ¹	Whole.	Part.	Per cent. ¹
1907.....	9,324	296	0.10	42	.....	0.08	149,792	529,876	1.33
1908.....	8,090	198	.09	33	1	.07	175,126	704,666	1.63
1909.....	10,747	179	.10	82	1	.12	141,057	899,628	1.87
1910.....	11,127	24,714	.32	226	1	.19	113,742	874,211	2.01
1911.....	10,789	7,394	.14	61	.....	.11	117,383	1,009,672	2.13
1912.....	15,402	3,871	.13	84	1	.13	203,778	463,859	1.13
1913.....	16,657	939	.12	76	1	.14	250,661	506,449	1.34
1914.....	20,563	1,564	.15	746	8	.62	281,303	563,166	1.48
1915.....	17,611	298	.14	653	14	.40	290,606	644,688	1.61
1916.....	15,057	1,007	.13	663	161	.46	275,087	738,561	1.63
1917.....	16,749	437	.15	1,349	42	.80	265,396	781,331	1.64
1918.....	12,564	227	.15	419	1	.28	202,827	528,482	1.25
1919.....	14,371	330	.13	318	17	.27	212,245	603,050	1.15
1920.....	20,028	627	.17	135	1	.18	226,125	748,166	1.49
1921.....	12,666	270	.10	23	10	.16	189,871	671,504	1.38
Average:									
1907-1910.....	9,872	6,347	.16	96	1	.14	144,929	752,095	1.71
1911-1915.....	16,204	2,813	.14	324	6	.36	228,746	637,567	1.53
1916-1920.....	15,754	526	.15	577	44	.44	236,236	679,872	1.43

¹ Includes both whole and part. It should be understood that the parts here recorded are primal parts; a much larger number of less important parts, especially in swine, are condemned in addition.

² Includes condemnation of horses: Whole, 64, part 4, for 1920; and whole, 19, part 7, for 1921.

TABLE 382.—*Quantity of meat and meat food products prepared, and quantity and percentage condemned, under Federal supervision annually, 1907 to 1921.*

Year ended June 30—	Prepared or processed.	Condemned.	Per cent. percentage con- demned.	Year ended June 30—	Prepared or processed.	Condemned.	Per cent. percentage con- demned.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Per cent.</i>		<i>Pounds.</i>	<i>Pounds.</i>	<i>Per cent.</i>
1907.....	4,464,213,208	14,874,587	0.33	1917.....	7,663,633,957	19,857,270	0.26
1908.....	5,958,298,364	43,244,206	.73	1918.....	7,905,184,924	17,543,184	.22
1909.....	6,791,437,032	24,679,754	.36	1919.....	9,169,042,049	30,323,320	.33
1910.....	6,223,964,593	19,031,808	.31	1920.....	7,755,158,142	18,201,618	.23
1911.....	6,934,233,214	21,073,577	.31	1921.....	7,127,820,472	14,079,435	.20
1912.....	7,279,558,956	18,096,587	.25	Average:			
1913.....	7,094,809,809	18,851,930	.27	1907-1910.....	5,850,478,299	25,482,580	.43
1914.....	7,083,295,975	19,135,469	.27	1911-1915.....	7,174,993,591	19,187,587	.27
1915.....	7,533,070,002	18,780,122	.25	1916-1920.....	7,993,452,253	20,764,538	.26
1916.....	7,474,242,192	17,897,367	.24				

The principal items in Table 382, in the order of magnitude, are: Cured pork, lard, sausage, canned beef, lard substitutes, and oleo products. The list includes a large number of less important items.

It should be understood that the above products are entirely separate and additional to the carcass inspection at time of slaughter. They are, in fact, reinspections of such portions of the carcass as have subsequently undergone some process of manufacture.

TABLE 383.—*Quantity of meat and meat food products imported, and quantity and percentage condemned or refused entry, 1914 to 1921.*

Year ended June 30—	Total imported.	Condemned.	Refused entry.	Percentage condemned or refused.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Per cent.</i>
1914 (9 months).....	197,389,348	551,859	.....	0.28
1915.....	245,023,437	2,020,291	70,454	.85
1916.....	110,514,476	298,276	113,907	.37
1917.....	29,138,996	382,160	14,611	1.36
1918.....	59,025,484	989,916	414,452	2.38
1919.....	179,911,142	340,358	501,802	.47
1920.....	77,781,329	229,338	392,168	.50
1921.....	162,042,627	419,009	193,703	.82

IMPORTS AND EXPORTS OF AGRICULTURAL PRODUCTS.¹

[Compiled in the Bureau of Markets and Crop Estimates from reports of the Foreign Commerce and Navigation of the United States, United States Department of Commerce.]

TABLE 384.—*Agricultural imports of the United States during the 3 years ending Dec. 31, 1930.*

[The figures are in round thousands, i. e., 000 omitted.]

Article imported.	Year ending Dec. 31—					
	1918		1919		1920	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
ANIMAL MATTER.						
Animals, live:	<i>Thou-</i>	<i>sands.</i>	<i>Thou-</i>	<i>sands.</i>	<i>Thou-</i>	<i>sands.</i>
Cattle ².....number..	353	\$25,519	642	\$53,296	379	\$27,419
Horses ².....do.....	4	780	5	803	4	1,059
Sheep ².....do.....	150	1,654	225	2,473	173	1,730
Swine.....do.....	7	186	21	758	1	23
All other, including fowls.....		493		707		1,201
Total live animals.....		28,632		58,027		31,552
Beeswax.....pounds..	1,558	584	2,384	896	4,143	1,418
Dairy products:						
Butter.....do.....	1,655	580	9,519	4,860	37,454	18,646
Cheese.....do.....	7,562	3,059	11,332	4,073	15,994	5,637
Milk and cream.....		1,640				
Fresh.....gallons..	1,350	727	3,685	1,850	4,118	2,702
Condensed.....pounds..	10,905	928	16,509	2,080	23,756	3,332
Total dairy products.....		6,940		12,863		30,337
Eggs.....dozen.....	1,245	363	1,247	395	1,709	618
Egg albumen.....pounds..	1,387	503	7,978	6,061	9,111	4,593
Eggs, dried, frozen, etc.....do.....	6,752	2,460	24,891	8,470	29,023	7,234
Feathers and downs, crude:						
Ostrich.....do.....	(⁵)	676	309	2,698	143	1,058
Other.....do.....	(⁵)	844	1,600	853	3,720	1,509
Fibers, animal.						
Silk—						
Cocoons.....do.....	220	297	852	457	201	315
Raw, or as reeled from the cocoons.....pounds..	32,865	180,210	44,817	329,339	30,058	284,801
Waste.....do.....	15,635	13,692	9,853	12,061	9,401	15,832
Total silk.....do....	48,720	194,199	55,522	341,887	39,660	301,038
Wool and hair of the camel, goat, alpaca, and like animals—						
Class 1, clothing.....pounds..	373,911	216,790	334,100	171,289	212,392	109,001
Class 2, combing.....do.....	4,223	2,647	7,734	4,584	6,643	3,834
Class 3, carpets.....do.....	69,292	29,256	96,948	36,898	35,870	11,564
Hair of the angora goat, alpaca, etc.....pounds..	6,301	3,080	7,111	3,994	4,712	2,572
Total wool.....do....	453,727	251,773	445,893	216,765	259,617	126,971
Gelatin.....do.....	83	32	449	242	2,313	1,225
Glue and glue size.....do.....	732	173	866	209	2,777	662
Honey.....gallons..	407	657	454	566	990	1,335

¹ Forest products come within the scope of the Department of Agriculture and are therefore included in alphabetical order in these tables.

² Including all imported free of duty.

³ Jan. 1 to June 30.

⁴ July 1 to Dec. 31.

⁵ Not stated.

TABLE 384.—Agricultural imports of the United States during the 3 years ending Dec. 31, 1920—Continued.

Article imported.	Year ending Dec. 31—					
	1918		1919		1920	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
ANIMAL MATTER—continued.						
Packing-house products:	<i>Thou-</i>	<i>Thou-</i>	<i>Thou-</i>	<i>Thou-</i>	<i>Thou-</i>	<i>Thou-</i>
Blood, dried.....pounds.....	(1)	\$639	11,004	\$380	14,463	\$575
Bones, hoofs, and horns.....do.....	(1)	685	50,388	841	178,067	3,338
Bristles.....do.....	4,151	5,705	3,159	6,035	4,945	10,388
Grease.....do.....	(1)	3,559	33,871	3,304	26,323	2,843
Hair—						
Horse.....do.....	2,880	998	4,015	1,644	4,896	2,202
Other animal.....do.....	3,476	317	4,545	542	6,770	1,218
Hide cuttings and other glue stock.....pounds.....	9,382	455	13,781	979	36,856	2,239
Hides and skins, other than furs—						
Buffalo hides, dry.....pounds.....	5,819	1,547	15,620	3,463	9,484	2,731
Cabretta.....do.....			94	86	12	14
Calfskins—						
Dry.....do.....	5,489	2,237	42,325	20,914	16,903	9,980
Green or pickled.....do.....	2,093	717	22,230	12,739	18,230	9,271
Cattle hides—						
Dry.....do.....	34,836	10,157	96,190	34,367	59,150	21,092
Green or pickled.....do.....	186,215	41,873	311,092	91,224	216,174	64,383
Goat skins—						
Dry.....do.....	53,306	28,643	111,134	85,828	69,877	82,415
Green or pickled.....do.....	9,058	1,847	22,523	9,729	10,327	6,225
Horse and ass skins—						
Dry.....do.....	873	183	12,077	3,612	5,043	1,620
Green or pickled.....do.....	4,125	536	15,976	3,633	11,803	2,636
Kangaroo.....do.....	679	733	1,384	1,363	1,389	1,481
Sheepskins—						
Dry.....do.....	21,530	7,532	43,560	21,288	29,833	17,395
Green or pickled.....do.....	30,834	9,870	41,471	15,232	52,916	20,830
Other.....do.....	6,933	2,168	9,159	3,031	9,093	3,815
Total hides and skins.....do.....	361,890	108,043	744,825	306,509	510,239	243,878
Meat—						
Cured—						
Bacon and hams.....do.....	1,863	544	2,646	788	755	235
Meat prepared or preserved.....pounds.....	(1)	38,201	21,190	5,838	7,199	1,610
Sausage, bologna.....do.....	5	3	72	43	157	74
Fresh—						
Beef and veal.....do.....	23,339	4,159	38,462	6,408	50,182	8,037
Mutton and lamb.....do.....	608	134	8,209	1,547	101,168	12,645
Pork.....do.....	1,722	377	2,779	601	1,541	415
Other, including meat extracts.....pounds.....	(1)	7,338	8,596	1,838	7,448	2,009
Total meat.....do.....		50,756		17,063		25,045
Oleo stearin.....pounds.....	1,557	250	2,358	475	963	181
Rennets.....do.....	(1)	79	103	147	230	141
Sausage casings.....do.....	(1)	3,508	11,234	5,629	12,138	7,019
Tallow.....do.....	5,395	702	12,096	1,813	14,875	1,842
Total packing-house products.....do.....		175,696		345,361		300,939
Total animal matter.....do.....		663,532		995,303		810,521
VEGETABLE MATTER.						
Argols or wine lees.....pounds.....	27,687	4,825	25,736	4,287	35,577	4,465
Breadstuffs. (See Grain and grain products.)						
Broom corn.....long tons.....	2	365	(4)	2	1	77
Chicory root, prepared.....pounds.....			(4)	(4)	9,115	620
Cocoa and chocolate:						
Cocoa, crude, leaves and shells of.....do.....	359,960	37,955	391,397	57,999	343,667	54,308
Cocoa and chocolate, prepared.....do.....	56	17	967	342	1,319	503
Total cocoa and chocolate.....do.....	360,016	37,972	392,364	58,341	344,986	54,811

¹ Not stated.² Except sheepskins with the wool on.³ July 1 to Dec. 31.⁴ Less than 500.

TABLE 384.—*Agricultural imports of the United States during the 3 years ending Dec. 31, 1920—Continued.*

Article imported.	Year ending Dec. 31—					
	1918		1919		1920	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
VEGETABLE MATTER—continued.	<i>Thou-</i>	<i>Thou-</i>	<i>Thou-</i>	<i>Thou-</i>	<i>Thou-</i>	<i>Thou-</i>
Coffee.....pounds.	sands 1,052,202	sands \$99,423	sands 1,337,564	sands \$261,270	sands 1,297,439	sands \$252,451
Fibers, vegetable:						
Cotton.....do.	112,684	41,624	175,358	71,886	299,994	138,744
Flax.....long tons.	8	7,362	4	3,997	7	3,849
Hemp.....do.	4	1,982	2	954	8	3,226
Istle.....do.	32	3,649	21	2,523	24	3,335
Jute and jute butts.....do.	71	6,463	62	8,384	96	9,693
Kapoc.....do.	10	2,820	11	3,673	10	3,848
Manila.....do.	79	20,333	69	19,255	67	20,515
New Zealand flax.....do.	14	4,868	7	1,641	6	1,034
Sisal grass.....do.	152	54,937	145	39,554	181	33,535
Other.....do.	14	2,973	7	1,797	7	1,342
Total vegetable fibers.....do.		156,011		153,664		219,121
Forest products:						
Cinchona bark.....pounds.	3,508	792	5,981	1,076	4,068	1,526
Cork, wood and bark.....do.	(1)	1,898	28,287	1,803	63,972	2,725
Dyewood extracts.....do.	1,459	183	1,167	210	1,156	170
Dyewoods—						
Logwood.....long tons.	30	668	29	550	73	2,187
Other.....do.	31	796	2	38	4	70
Total dyewoods.....do.	61	1,464	31	588	77	2,257
Gums—						
Arabic or Senegal.....pounds.	4,461	816	5,943	819	6,498	764
Camphor—						
Crude.....do.	3,474	1,547	2,694	2,506	3,833	5,207
Refined.....do.	947	770	2,125	3,830	1,144	2,246
Chicle.....do.	7,251	3,917	9,446	6,217	9,860	6,749
Copal, kauri, and damar.....do.	33,664	3,250	20,326	2,083	69,334	9,956
Gambier, or terra japonica.....do.	8,764	952	4,745	432	10,095	807
India rubber, gutta-percha, etc.—						
Balata.....pounds.	1,547	836	1,628	937	2,384	1,260
Guayule gum.....do.	1,376	413	3,204	761	1,699	346
Gutta-poolatong or East Indian gum.....pounds.	9,932	684	18,663	2,214	12,706	2,069
Gutta-percha.....do.	1,208	226	6,496	1,069	7,129	1,520
India rubber.....do.	326,939	146,378	535,940	215,820	566,546	242,796
Total India rubber, etc. do.	340,022	148,537	565,931	220,801	590,464	247,991
Shellac.....do.	18,664	9,029	24,426	11,869	28,557	23,089
Other.....do.	(1)	1,903	11,291	3,387	12,990	3,756
Total gums.....do.		170,721	646,927	251,944	732,805	300,205
Ivory, vegetable.....do.	41,142	1,323	31,779	1,172	49,690	2,551
Tanning materials—						
Mangrove bark.....long tons.	2	97	3	88	7	316
Quebracho, extract.....pounds.	131,110	5,699	144,497	6,963	108,897	6,700
Quebracho wood.....long tons.	23	357	4	54	56	850
Sumac, ground or unground.....pounds.	13,310	425	14,725	558	12,997	429
Other.....do.		438		1,824		3,016
Total tanning materials.....do.		7,016		9,427		11,311
Wood—						
Brier root or brierwood and ivory or laurel root.....do.		831		1,288		1,008
Chair cane or reed.....do.		265		236		1,286

¹ Not stated.² Includes "Waste, refuse, etc.," prior to July 1, 1918.³ July 1 to Dec. 31.

TABLE 384.—Agricultural imports of the United States during the 3 years ending Dec. 31, 1920—Continued.

Article imported.	Year ending Dec. 31—					
	1918		1919		1920	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
VEGETABLE MATTER—continued.						
Forest products—Continued.						
Wood—Continued.						
Cabinet woods, unsawed—						
Cedar.....M feet..	9	\$677	9	\$592	8	\$750
Mahogany.....do....	44	3,848	43	3,973	53	7,193
Other.....do.....	(1)	743	8	706	14	1,330
Total cabinet woods.....do....		5,238		5,271	75	9,253
Logs and round timber.....do....	34	567	93	1,691	76	2,650
Lumber—						
Boards and other sawed lum-						
ber.....M feet..	1,209	34,315	1,149	37,261	1,351	57,724
Laths.....M.....	282	966	803	3,037	442	4,173
Shingles.....M.....	1,798	5,627	1,987	8,720	1,964	11,260
Other.....do.....		1,072		1,389		2,901
Total lumber.....do.....		41,980		50,407		76,058
Pulp wood, peeled, rossed, and						
rough.....cords..	1,370	13,363	1,047	10,459	1,241	16,903
Rattan and reeds.....do.....		1,308		872		2,407
Timber, ship and other.....do....		257		297		563
All other wood.....do.....		928		667		1,576
Total wood.....do.....		64,727		71,188		111,172
Wood pulp.....long tons..	516	31,477	568	37,048	809	89,418
Total forest products.....do....		279,605		374,455		521,832
Fruits:						
Fresh or dried—						
Bananas.....bunches..	32,249	15,438	36,993	15,935	39,320	19,038
Currants.....pounds..	5,091	553	14,852	2,290	55,832	6,076
Dates.....do.....	10,721	481	36,921	1,591	32,347	2,088
Figs.....do.....	11,775	873	25,359	4,518	31,437	3,483
Grapefruit.....do.....		137		611		627
Grapes.....cubic feet..	663	993	535	845	992	1,635
Lemons.....do.....		1,858		2,438		2,903
Olives.....gallons..	2,666	1,323	3,754	2,339	4,778	4,975
Oranges.....do.....		117		53		53
Pineapples.....do.....		846		1,046		1,423
Raisins.....pounds..	109	21	1,567	443	46,039	7,564
Other.....do.....		1,844		4,609		4,136
Total fresh or dried.....do....		24,514		37,024		53,858
Prepared or preserved.....do....		542		1,291		2,706
Total fruits.....do.....		25,056		38,315		56,564
Grain and grain products:						
Grain—						
Corn.....bushels..	1,990	1,976	11,213	10,967	7,784	9,297
Oats.....do.....	1,444	1,244	609	470	6,728	6,549
Wheat.....do.....	17,036	30,429	7,911	14,906	35,800	75,359
Total grain.....do.....	20,470	33,649	19,733	26,343	50,321	91,205
Grain products—						
Bread and biscuit.....pounds..	(1)	72	993	206	1,460	363
Macaroni, vermicelli, etc., do....	402	41	903	102	805	107
Meal and flour, wheat flour						
.....barrels..	167	1,512	17	171	801	8,669
Total grain products.....do....		1,625		479		9,144
Other.....do.....		4,191		6,534		4,082
Total grain and grain products.....do....		39,465		33,356		105,331

¹ Not stated.² July 1 to Dec. 31.

TABLE 384.—Agricultural imports of the United States during the 3 years ending Dec. 31, 1920—Continued.

Article imported.	Year ending Dec. 31—					
	1918		1919		1920	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
VEGETABLE MATTER—continued.						
Hay.....long tons..	Thou- sands. 400	Thou- sands. \$4,860	Thou- sands. 203	Thou- sands. \$3,082	Thou- sands. 209	Thou- sands. \$4,482
Hops.....pounds..	77	51	467	238	5,949	2,933
Indigo, natural and synthetic.....do....	2,524	2,610	1,051	692	919	787
Licence root.....do....	27,100	1,997	49,892	3,835	56,226	3,455
Liquors, alcoholic.....do....		5,047		525		3,269
Nursery stock, mainly flowering bulbs.....do....		2,007		4,421		5,080
Nuts:						
Almonds—						
Shelled.....pounds..	21,545	5,732	28,008	10,582	18,151	6,733
Unshelled.....do....	6,149	948	7,483	1,305	6,703	1,062
Coconuts.....number..	(1)	2,490	85,082	4,053	91,165	4,230
Coconut meat—						
Not prepared.....pounds..	430,649	26,263	258,916	16,545	215,188	14,187
Prepared.....do....	20,270	2,607	29,638	4,141	32,921	5,167
Cream and Brazil.....do....	11,282	663	43,076	3,136	13,998	1,862
Filberts—						
Shelled.....do....	4,246	892	3,779	1,194	5,034	1,326
Unshelled.....do....	7,433	926	16,747	3,396	14,096	1,863
Marrons, crude.....do....	2 66	2 3	5,012	394	29,480	1,716
Palm and palm-nut kernels.....do....	2 16,905	2 199	5,610	239	8,329	485
Peanuts—						
Shelled.....do....	67,747	4,276	24,180	1,934	110,810	10,571
Unshelled.....do....	1,971	129	5,667	204	8,703	772
Walnuts—						
Shelled.....do....	9,707	3,786	10,261	5,317	15,818	6,032
Unshelled.....do....	3,304	466	21,235	3,985	16,073	2,466
Other.....do....		552		846		1,196
Total nuts.....do....		49,932		57,511		59,659
Oil cake.....pounds..	27,789	1,765	112,406	2,371	228,853	4,415
Oils, vegetable:						
Fixed or expressed—						
Chinese nut.....gallons..	5,696	6,387	7,180	8,121	9,062	11,077
Cocoa butter or butterine.....pounds..	3	1	1	1	72	25
Coconut oil.....do....	356,089	44,290	281,063	35,380	216,327	33,080
Cottonseed.....do....	18,373	2,215	27,806	3,673	9,458	1,305
Linseed.....gallons..	28	37	2,152	3,040	4,693	6,489
Olive, edible.....do....	171	451	9,024	18,014	4,079	12,169
Olive, other.....do....	(2)	(2)	232	435	66	132
Palm oil.....pounds..	20,993	1,651	41,818	4,317	41,948	5,430
Palm kernel.....do....	34	5	1,929	143	1,604	238
Peanut.....gallons..	9,129	8,531	20,540	22,010	12,683	16,990
Rapeseed.....do....	3,077	3,096	1,117	1,306	1,721	1,922
Soya bean.....pounds..	335,984	38,455	195,808	24,019	112,214	13,721
Other.....do....		2,506		2,558		1,866
Total, fixed or expressed.....do....		107,625		123,017		164,443
Volatile or essential—						
Birch and cajaput.....pounds..	(1)	30	17	13	22	10
Lemon.....do....	588	436	607	612	751	1,063
Other.....do....		2,818		6,358		7,973
Total, volatile or essential.....do....		3,284		6,983		9,046
Total vegetable oils.....do....		110,909		130,000		113,489
Opium, crude.....pounds..	160	2,676	730	8,280	211	1,312
Rice, rice meal, etc.:						
Rice—						
Cleaned.....pounds..	424,692	17,907	144,090	9,905	111,604	11,475
Uncleaned, including paddy.....do....	57,376	3,023	29,495	2,250	29,536	2,485
Rice flour, rice meal, and broken rice.....pounds..	75,980	2,558	1,010	87	1,721	126
Total rice, etc.....do....	558,048	23,488	174,595	12,242	142,861	14,086
Sago, tapioca, etc.....do....	(1)	3,903	99,275	5,208	104,843	5,929

1 Not stated.

2 July 1 to Dec. 31.

3 Less than 500.

TABLE 384.—Agricultural imports of the United States during the 3 years ending Dec. 31, 1920—Continued.

Article imported.	Year ending Dec. 31—					
	1918		1919		1920	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
VEGETABLE MATTER—continued.						
Seeds:	<i>Thou-</i>	<i>Thou-</i>	<i>Thou-</i>	<i>Thou-</i>	<i>Thou-</i>	<i>Thou-</i>
Castor bean..... bushels..	sands. 639	sands. \$1,759	sands. 1,209	sands. \$3,674	sands. 1,239	sands. \$2,842
Clover.....						
Red..... pounds..	931	176	7,026	2,410	12,693	4,627
Other..... do.....	8,589	1,908	18,016	4,992	12,794	2,908
Flaxseed..... bushels..	12,974	32,994	14,036	44,360	24,641	74,623
Grass seed, n. e. s. pounds..	6,076	569	15,610	2,605	21,113	4,485
Mustard..... do.....	14,449	1,279	14,226	1,260	9,063	962
Sugar beet..... do.....	4,297	1,341	9,830	2,137	23,446	5,213
Other..... do.....		6,168		7,757		6,816
Total seeds..... do.....		45,194		69,195		102,466
Spices:						
Unground—						
Capsicum..... pounds..	11,788	1,200	1,161	154	3,660	559
Cassia..... do.....	12,571	1,145	8,710	878	6,750	707
Cloves..... do.....	11,634	1,552	6,150	1,523	6,250	2,257
Ginger root, not preserved. do.....	5,691	512	4,374	521	8,125	1,146
Nutmegs..... do.....	12,225	1,396	4,089	754	4,218	816
Pepper, black or white. do.....	48,869	8,043	22,826	3,703	13,828	2,418
Total unground..... do.....	72,778	10,848	47,320	7,533	42,831	7,903
Ground—						
Capsicum..... do.....	11,444	1,415	1,561	501	2,934	1,178
Mustard..... do.....	1,460	1,210	1,500	797	1,593	790
Total ground..... do.....	1,904	625	3,061	1,298	4,527	1,968
Other spices..... do.....	16,168	2,625	6,060	972	13,560	1,771
Total spices..... do.....	90,850	14,098	56,441	9,803	60,918	11,642
Starch..... do.....	26,431	2,108	2,612	243	19,139	1,017
Sugar and molasses:						
Molasses..... gallons..	141,339	10,424	120,156	4,177	160,208	5,119
Sugar—						
Beet..... pounds..	(2)	(2)	1	(1)	36,754	6,402
Cane..... do.....	5,166,841	241,390	7,019,690	393,171	8,028,668	1,008,786
Maple sugar and sirup. do.....	4,135	875	3,928	1,110	8,338	1,975
Total sugar..... do.....	5,170,976	242,265	7,023,619	394,281	8,073,760	1,017,163
Total sugar and molasses. do.....		252,689		393,458		1,022,282
Tea..... pounds..	134,418	29,540	80,983	20,146	90,247	24,392
Tobacco:						
Wrapper..... do.....	14,776	12,406	7,775	10,158	11,768	18,272
Filler..... do.....	76,201	41,674	78,210	64,987	70,454	63,353
Total tobacco..... do.....	90,977	54,080	85,985	75,145	82,222	81,630
Vanilla beans..... do.....	759	1,196	1,150	2,407	1,240	2,406
Vegetables:						
Fresh and dried—						
Beans..... bushels..	4,210	18,416	4,972	17,527	2,095	7,510
Garlic..... pounds..	12,241	1,147	9,961	1,335	7,705	872
Onions..... bushels..	261	212	741	1,018	1,819	2,364
Peas, dried..... do.....	2,243	8,896	2,141	7,489	1,803	7,643
Potatoes—						
Irish..... do.....	1,201	1,369	5,544	5,907	6,062	12,527
Sweet and desiccated or prepared..... do.....		5		480		348
Other..... do.....		2,026		2,157		2,720
Total fresh and dried..... do.....		31,071		35,913		33,984

¹ July 1 to Dec. 31.² Less than 500.

TABLE 384.—*Agricultural imports of the United States during the 3 years ending Dec. 31, 1920—Continued.*

Article imported.	Year ending Dec. 31—					
	1918		1919		1920	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
VEGETABLE MATTER—continued.						
Vegetables—Continued.						
Prepared or preserved—						
Mushrooms.....pounds..	Thou- sands. 1,289	Thou- sands. \$527	Thou- sands. 2,093	Thou- sands. \$1,356	Thou- sands. 3,220	Thou- sands. \$1,565
Pickles and sauces.....		337		1,195		1,554
Other.....		754		2,182		3,319
Total prepared or preserved.....		1,618		4,733		6,438
Total vegetables.....		32,689		40,646		40,422
Vinegar.....gallons..	53	30	99	59	193	90
Wax, vegetable.....pounds..	9,878	3,682	10,814	3,810	6,554	2,168
Total vegetable matter, includ- ing forest products.....		1,287,270		1,772,063		2,722,180
Total vegetable matter, exclud- ing forest products.....		1,007,665		1,397,578		2,200,848
Total agricultural imports, includ- ing forest products.....		1,950,801		2,767,336		3,532,700
Total agricultural imports, exclud- ing forest products.....		1,671,196		2,392,880		3,011,368

TABLE 385.—*Agricultural exports (domestic) of the United States during the 3 years ending Dec. 31, 1920.*

[The figures are in round thousands, i. e., 000 omitted.]

Article exported.	Year ending Dec. 31—					
	1918		1919		1920	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
ANIMAL MATTER.						
Animals, live:						
Cattle.....number..	Thou- sands. 17	Thou- sands. \$1,093	Thou- sands. 70	Thou- sands. \$6,440	Thou- sands. 85	Thou- sands. \$10,753
Horses.....do.....	51	9,858	20	2,856	14	2,716
Mules.....do.....	17	3,361	7	1,189	9	1,866
Sheep.....do.....	8	121	35	370	49	572
Swine.....do.....	10	334	25	684	55	1,724
Other (including fowls).....		289		465		702
Total live animals.....		15,046		12,004		18,333
Beeswax.....pounds..	165	63	210	92	633	295
Dairy products:						
Butter.....do.....	26,194	10,869	34,556	17,504	17,488	10,142
Cheese.....do.....	48,405	11,735	14,160	5,950	16,292	5,054
Milk—						
Condensed, evaporated, and pow- dered.....pounds..	551,140	72,825	852,865	121,893	414,250	65,239
Other, including cream.....		529		1,730		382
Total dairy products.....		95,958		146,477		80,817
Eggs.....dozen.....	20,938	8,428	38,789	18,812	26,842	13,569
Egg yolks, canned eggs, etc.....		718		132		310
Feathers.....		253		863		679
Fibers, animal, wool.....pounds..	407	463	2,840	2,231	8,845	4,937
Glue.....do.....	5,810	1,111	8,488	1,481	13,565	2,415
Honey.....do.....	11,599	2,223	9,076	1,955	1,540	265

TABLE 385.—*Agricultural exports (domestic) of the United States during the 3 years ending Dec. 31, 1920—Continued.*

Article exported.	Year ending Dec. 31—					
	1918		1919		1920	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
ANIMAL MATTER—continued.						
Packing-house products:	<i>Thou-</i>	<i>sands.</i>	<i>Thou-</i>	<i>sands.</i>	<i>Thou-</i>	<i>sands.</i>
Beef—						
Canned.....pounds..	141,457	\$51,498	53,897	\$20,673	23,766	\$5,790
Cured or pickled.....do.	44,206	7,921	42,805	8,739	25,771	3,660
Fresh.....do.	514,342	109,605	174,427	40,281	89,649	17,565
Oils, oleo oil.....do.	69,106	15,493	75,585	22,025	74,368	16,585
Oleomargarine.....do.	8,909	2,399	22,940	6,577	16,558	4,567
Stearin.....do.	10,530	2,291	20,855	4,171	17,513	3,488
Tallow.....do.	4,223	746	38,954	6,370	20,692	2,951
Total beef.....do.	792,793	189,953	429,433	108,836	268,317	54,606
Bones, hoofs, and horns.....		308		371		270
Grease, and soap stock—						
Lubricating.....		3,003		6,040		7,372
Soap stock.....		2,730		6,656		6,698
Hair.....		681		1,551		1,328
Hides and skins other than furs—						
Calfskins.....pounds..	2,213	867	4,654	3,218	1,140	680
Cattle.....do.	2,338	682	16,996	6,290	11,485	3,761
Horse.....do.	54	14	467	135	655	143
Other.....do.	499	215	2,806	1,252	4,122	1,019
Total.....do.	5,104	1,778	24,923	10,895	17,402	6,203
Lord compounds.....do.	43,977	10,259	124,963	31,606	32,051	7,219
Meat, canned, n. e. s.....		8,820		12,351		6,480
Mutton.....pounds..	1,631	387	3,009	633	3,575	759
Oils, animal, n. e. s.....	795	832	1,950	2,955	517	774
Pork—						
Canned.....pounds..	5,267	1,776	5,792	2,422	1,802	752
Cured—						
Bacon.....do.	1,104,788	315,968	1,190,297	373,913	636,676	156,297
Hams and shoulders.....do.	537,213	145,675	596,796	199,429	185,247	50,888
Salted or pickled.....do.	36,672	8,535	34,114	8,633	38,709	7,070
Total cured.....do.	1,678,673	470,178	1,821,207	571,975	860,632	214,855
Fresh.....do.	11,633	2,908	26,777	8,348	38,305	9,090
Lard.....do.	548,818	144,933	790,902	237,983	612,250	143,371
Lard, neutral.....do.	6,307	1,613	22,957	7,726	23,238	5,806
Oils, lard oil ¹.....do.	335	75	1,087	220	667	128
Total pork.....do.	2,251,033	621,483	2,638,721	828,674	1,536,894	374,002
Sausage—						
Canned.....pounds..	6,350	1,817	8,198	2,762	7,158	2,345
Other.....do.	6,029	2,125	13,889	5,912	10,509	4,183
Sausage casings.....do.	4,037	2,612	25,477	6,810	25,238	5,801
All other.....do.		6,944		11,043		7,170
Total packing-house products.....		853,782		1,038,295		485,275
Poultry and game.....		935		4,560		757
Total animal matter.....		978,980		1,226,901		607,648
VEGETABLE MATTER.						
Broom corn.....long tons..	4	1,396	4	900	4	777
Cocoa and chocolate.....		6,961		21,381		9,048
Coffee:						
Green.....pounds..	43,032	6,365	28,239	7,296	34,786	9,224
Roasted.....do.	1,696	297	6,062	1,321	1,972	580
Total coffee.....do.	44,727	6,662	34,351	8,817	36,758	9,804

¹ One gallon is estimated to weigh 7.5 pounds.

TABLE 335.—Agricultural exports (domestic) of the United States during the 3 years ending Dec. 31, 1920—Continued.

Article exported	Year ending Dec. 31—					
	1918		1919		1920	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
VEGETABLE MATTER—continued.						
Cotton:	<i>Thou-</i>	<i>Thou-</i>	<i>Thou-</i>	<i>Thou-</i>	<i>Thou-</i>	<i>Thou-</i>
Sea Island.....pounds..	sands. 1,037	sands. 856	sands. 2,492	sands. 31,543	sands. 975	sands. 9919
Upland.....do.....	2,047,096	664,380	3,352,494	1,134,517	3,154,296	1,133,871
Linters.....do.....	70,022	8,881	12,692	1,011	24,043	1,619
Total cotton.....do.....	2,118,175	674,123	3,367,678	1,137,371	3,179,314	1,136,409
Flavoring extracts and fruit juices.....		967		1,342		1,428
Flowers, cut.....		174		171		181
Forest products:						
Barks, and extracts of, for tanning—						
Bark.....long tons..	1	19	1	48	(¹)	18
Bark, extracts of.....		3,126		5,398		3,678
Total bark, etc.....		3,145		5,646		3,696
Logwood extracts.....		1,551		1,356		2,605
Moss.....		92		91		115
Naval stores—						
Rosin.....barrels..	779	7,551	1,210	20,434	1,164	19,469
Tar, turpentine, and pitch.....do.....	54	408	67	552	51	443
Turpentine, spirits of.....gallons..	3,717	2,277	10,672	10,448	9,458	14,586
Total naval stores.....		10,236		31,434		34,503
Wood—						
Logs and round timber—						
Fir.....M feet..	8	129	5	115	15	455
Pine, yellow.....do.....	6	188	8	137	10	307
Other logs—						
Hardwood.....do.....	1	60	7	251	8	640
Softwood.....do.....	8	151	18	461	50	1,583
Total.....do.....	23	531	38	964	83	2,985
Lumber—						
Boards, deals, and planks—						
Cypress.....M feet..	20	1,216	15	925	11	908
Fir.....do.....	272	8,986	301	9,722	451	17,641
Gum.....do.....	28	1,299	72	4,034	27	2,748
Oak.....do.....	65	3,710	158	11,747	105	12,459
Pine, white.....do.....	21	1,219	24	1,353	39	2,693
Pine, yellow—						
Pitch.....do.....	300	9,360	438	17,734	637	37,695
Short-leaf.....do.....	12	308	20	829	16	838
Other.....do.....	93	3,034	70	2,573	105	5,276
Poplar.....do.....	23	1,556	36	2,695	19	2,314
Redwood.....do.....	36	1,255	34	1,418	45	3,159
Spruce.....do.....	71	7,944	22	1,919	22	1,781
Other—						
Hardwood.....do.....	63	8,377	102	9,113	60	7,906
Softwood.....do.....	15	823	19	708	14	913
Total.....do.....	1,024	49,177	1,311	64,860	1,551	96,381
Railroad ties.....number..	2,682	2,305	4,700	4,179	4,246	5,566
Shingles.....M.....	20	96	16	89	34	197
Shooks—						
Box.....		2,738		2,821		4,249
Cooperage.....number..	1,542	4,428	2,857	8,489	1,747	6,916
Other.....do.....	363	758	480	546	180	159
Total shooks.....		7,924		11,856		11,324
Staves and heading—						
Heading.....		564		591		1,028
Staves.....number..	53,374	3,605	81,658	13,160	82,584	15,408
Total staves and heading.....		4,169		13,751		16,436
Other.....		2,348		3,790		5,093
Total lumber.....		66,022		98,525		134,997

¹ Less than 500.

TABLE 385.—Agricultural exports (domestic) of the United States during the 3 years ending Dec. 31, 1920—Continued.

Article exported.	Year ending Dec. 31—					
	1918		1919		1920	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
VEGETABLE MATTER—continued.						
Forest products—Continued.						
Timber—						
Hewn—						
Hardwood.....M feet..	2	\$33	4	\$269	3	\$212
Softwood.....do.....	5	121	5	146	7	228
Sawn—						
Pitch pine.....do.....	36	1,274	154	6,960	135	6,862
Other—						
Hardwood.....do.....	6	276	5	330	4	282
Softwood.....do.....	28	745	15	439	22	757
Total timber.....do.....	77	2,499	183	8,144	171	8,341
All other, including firewood.....		176		365		413
Total wood.....		69,228		107,998		146,736
Wood alcohol.....gallons..	2,624	2,036	718	750	703	1,244
Wood pulp.....long tons..	20	1,734	36	3,048	29	2,947
Total forest products.....		88,022		150,321		191,848
Fruits:						
Fresh or dried—						
Apples, dried.....pounds..	2,200	311	24,704	4,110	8,828	1,509
Apples, fresh.....barrels..	580	3,135	1,712	14,471	1,798	14,089
Apricots, dried.....pounds..	5,202	755	37,114	8,505	9,881	2,582
Berries.....		888		1,182		792
Lemons.....boxes.....	193	1,089	307	1,372	293	1,188
Oranges.....do.....	857	4,279	1,777	7,638	1,518	7,519
Peaches, dried.....pounds..	4,840	544	9,022	1,560	7,925	1,466
Pears, fresh.....		929		1,765		2,202
Prunes.....pounds.....	22,888	2,178	108,208	15,722	75,139	11,738
Raisins.....do.....	52,658	4,668	110,183	13,089	53,312	9,505
Other—						
Dried.....		753		2,557		2,168
Fresh.....		3,397		4,713		4,188
Waste, cannery (pulp, cores, etc)						
.....pounds.....					1,248	77
Total, fresh or dried.....		22,926		76,684		59,023
Preserved—						
Canned—						
Peaches.....		1,179		9,490		6,342
Other.....		4,134		31,986		15,172
Other preserved.....		1,980		4,518		1,882
Total preserved.....		7,303		45,994		23,396
Total fruits.....		30,229		122,678		82,419
Ginseng.....pounds.....	227	1,373	308	3,339	160	1,875
Glucose and grape sugar:						
Glucose.....pounds.....	42,740	2,553	220,381	13,169	144,760	8,994
Grape sugar.....do.....	14,592	906	35,287	1,971	17,736	1,074
Grain and grain products:						
Grain—						
Barley.....bushels.....	18,805	30,565	37,612	53,832	17,851	27,165
Buckwheat.....do.....	1	3	180	307	300	543
Corn.....do.....	39,899	69,269	11,193	18,624	17,761	26,454
Oats.....do.....	114,463	98,222	55,294	46,435	12,878	12,338
Rye.....do.....	7,632	15,616	32,898	61,786	57,070	122,240
Wheat.....do.....	111,177	260,613	148,086	356,898	218,287	596,975
Total grain.....do.....	291,977	474,288	285,269	537,882	324,150	785,715
Grain products—						
Bran and middlings.....long tons..	7	327	5	233	3	163
Bread and biscuit.....pounds..	8,586	1,278	12,827	2,506	18,755	3,732
Cereal preparations, for table food.....		6,854		8,819		7,189
Distillers' and brewers' grains,						
.....long tons..	(1)	13	2	126	(1)	24
Malt.....bushels.....	896	1,695	10,046	16,695	4,251	7,595

1 Less than 500.

TABLE 385.—Agricultural exports (domestic) of the United States during 3 years ending Dec. 31, 1920—Continued.

Article exported.	Year ending Dec 31—					
	1918		1919		1920	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
VEGETABLE MATTER—continued						
Grain and grain products—Continued						
Grain products—Continued						
Meal and flour—						
Barley flour.....barrels.	1,860	153,878	256	\$2,572	(²)	(²)
Cornmeal.....do.	1,793	18,761	1,202	10,920	867	\$7,478
Oatmeal.....pounds.	299,198	17,353	223,967	11,999	65,921	3,891
Rye flour.....barrels.	1,416	15,450	1,266	12,425	364	3,633
Wheat flour.....do.	21,707	244,653	26,150	253,453	19,584	224,472
Total meal and flour.....		300,095		231,369		239,479
Mill feed.....long tons.	10	466	12	784	10	530
Total grain products.....		310,728		360,322		258,762
All other.....		5,751		3,804		4,754
Total grain and grain products.....		790,767		902,218		1,049,231
Hay.....long tons.	28	904	32	963	63	1,797
Hops.....pounds.	3,670	971	20,798	8,832	25,624	17,088
Liquors, alcoholic.....		9,901		19,450		24,471
Nursery stock.....		405		405		405
Nuts:						
Peanuts.....pounds.	12,319	1,603	19,773	2,123	9,366	1,115
Other.....		542		1,462		857
Total nuts.....		2,145		3,585		1,972
Oil cake and oil-cake meal:						
Corn.....pounds.	69	3	964	27	131	4
Cottonseed—						
Cake.....do.	1,384	32	394,626	12,919	314,018	8,818
Meal.....do.	10,283	250	233,507	7,262	26,028	731
Flaxseed or linseed—						
Cake.....do.	45,393	1,115	327,923	11,657	223,288	7,639
Meal.....do.	40,562	1,134	25,829	846	12,339	404
Other.....do.	9,372	245	104,379	3,330	13,701	410
Total oil cake and meal.....do.	107,003	2,785	1,057,228	30,041	589,593	18,012
Oils, vegetable:						
Fixed or expressed—						
Cocoa butter.....pounds.	(³)	(²)	{ 17,320	13,032	5,377	1,049
Coconut.....do.			{ 1118,612	124,601	25,695	4,908
Corn.....do.	171	37	6,415	1,551	12,069	2,415
Cottonseed.....do.	119,067	23,184	193,133	40,830	184,754	34,875
Linseed.....gallons	774	1,162	1,502	2,607	715	1,240
Peanut.....pounds.	(²)	(³)	{ 14,342	11,043	1,425	291
Soya bean.....do.			{ 27,715	16,098	43,512	9,412
Other.....		4,088		18,507		1,886
Total, fixed or expressed.....		28,471		98,329		56,976
Volatile or essential—						
Peppermint.....pounds.	60	203	98	654	62	457
Other.....		745		1,367		1,571
Total volatile or essential.....		948		2,021		2,028
Total vegetable oils.....		29,419		100,350		59,004
Rice.....pounds.	167,933	12,425	376,876	34,776	392,613	37,469
Roots, herbs, and barks, n. e. s.		728		1,632		1,466

¹ July 1 to Dec. 31.² Less than 500.³ Not separately stated.

TABLE 985.—Agricultural exports (domestic) of the United States during 3 years ending Dec. 31, 1920—Continued.

Article exported.	Year ending Dec. 31—					
	1918		1919		1920	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
VEGETABLE MATTER—continued.						
Seeds:	<i>Thou-</i>	<i>Thou-</i>	<i>Thou-</i>	<i>Thou-</i>	<i>Thou-</i>	<i>Thou-</i>
Cotton.....pounds..	1,741	\$70	1,919	\$89	5,270	\$309
Flaxseed or linseed.....bushels..	26	135	17	125	16	112
Grass and clover seed—						
Clover.....pounds..	5,986	1,836	7,944	3,206	4,996	1,928
Timothy.....do..	8,564	881	13,346	1,633	13,522	1,666
Other.....do..	2,952	513	4,440	717	4,252	813
Total grass and clover seed.....do....	17,502	3,260	25,730	5,556	22,760	4,407
All other seeds.....do..		2,032		2,772		2,187
Total seeds.....do..		5,497		8,542		7,015
Spices.....do..		481		588		516
Starch:						
Corn starch.....pounds..	33,620	1,759	179,437	10,220	116,463	6,892
Other.....do..	16,083	1,020	89,704	5,342	31,180	2,054
Stearin, vegetable.....do..	1,020	234	4,159	767	1,810	352
Sugar, molasses, and sirup:						
Molasses.....gallons..	5,414	1,191	6,680	1,311	4,828	1,697
Sirup.....do..	3,184	2,012	19,732	10,299	6,595	4,131
Sugar, refined.....pounds..	407,296	27,039	1,475,408	114,757	924,192	91,877
Total sugar, molasses, and sirup.....do....		30,242		126,347		100,136
Tobacco:						
Leaf.....pounds..	403,871	122,600	765,913	259,438	467,662	244,897
Stems and trimmings.....do..	2,955	318	10,765	547	12,238	635
Total tobacco.....do..	406,826	122,918	776,678	259,985	479,900	245,532
Vegetables:						
Fresh or dried—						
Beans.....bushels..	2,399	14,226	3,795	19,966	1,765	7,672
Onions.....do..	693	1,112	817	2,095	946	2,076
Peas, dried.....do..	322	1,689	476	2,665	296	1,416
Potatoes.....do..	3,853	5,834	3,642	6,475	4,154	10,200
Total fresh or dried.....do....	7,267	22,861	8,730	31,201	7,161	21,364
Prepared or preserved—						
Canned.....do..		12,420		11,355		6,340
Pickles and sauces.....do..		1,130		2,040		2,273
Total prepared or preserved.....do....		13,550		13,395		8,613
All other vegetables.....do..		2,204		3,237		2,807
Total vegetables.....do..		33,615		47,833		32,784
Vinegar.....gallons..	319	89	469	136	291	113
Yeast.....do..		1,203		1,100		616
Total vegetable matter, including forest products.....do....		1,865,707		3,030,532		3,050,820
Total vegetable matter, excluding forest products.....do....		1,777,685		2,880,257		2,858,972
Total agricultural exports, including forest products.....do....		2,844,687		4,257,483		3,658,467
Total agricultural exports, excluding forest products.....do....		2,756,665		4,107,159		3,466,620

TABLE 386.—*Value of principal groups of farm and forest products exported from and imported into the United States, 1918-1920.*

[Compiled from reports on the Foreign Commerce of the United States.]

Article.	Exports (domestic merchandise)			Imports.		
	Yearend Dec. 31—			Yearend Dec. 31—		
	1918	1919	1920	1918	1919	1920
FARM PRODUCTS.						
ANIMAL MATTER.						
Animals, live.....	\$15,045,142	\$12,003,684	\$18,332,960	\$28,631,161	\$58,037,361	\$31,552,223
Dairy products.....	95,957,723	146,477,244	80,817,302	6,940,202	12,823,812	30,337,576
Eggs, fresh, canned, etc..	9,146,280	18,943,978	13,878,795	3,325,933	14,925,730	12,444,261
Feathers, crude.....	252,903	863,250	678,644	1,520,199	3,550,956	2,507,047
Packing-house products.	853,782,220	1,038,294,077	485,272,079	175,635,614	345,361,052	300,940,054
Silk.....				194,198,598	341,836,770	201,048,193
Wool.....	482,969	2,230,629	4,936,740	251,772,616	216,764,501	128,972,088
Other animal matter.....	4,332,525	8,088,431	3,731,349	1,446,455	1,912,569	4,639,063
Total animal matter.....	978,979,762	1,226,901,293	607,647,869	663,530,808	995,302,757	810,520,505
VEGETABLE MATTER.						
Argols or winelees.....				4,824,504	4,286,972	4,464,998
Cocoa and chocolate.....	6,961,457	21,380,801	9,047,918	37,972,369	58,341,884	54,811,176
Coffee.....	6,061,802	8,816,581	9,803,574	99,423,362	261,270,106	252,450,651
Cotton.....	674,122,790	1,137,371,252	1,136,408,916	41,624,242	71,886,290	138,743,702
Fibers, vegetable, other.				114,386,667	81,777,998	30,377,470
Fruits.....	30,228,780	122,676,783	82,417,950	25,054,154	38,314,146	56,562,838
Ginseng.....	1,772,586	3,338,531	1,875,348			
Glucose and grapesugar.	3,458,927	15,139,944	10,067,830			
Grain and grain products	790,767,657	902,220,969	1,049,233,922	39,465,098	33,355,174	105,331,057
Hay.....	904,030	962,075	1,797,396	4,860,460	3,081,537	4,482,015
Hops.....	970,598	8,832,255	17,088,472	50,862	227,909	2,932,830
Indigo.....				2,610,375	692,438	786,720
Licorice root.....				1,997,269	3,864,619	3,454,839
Liquors, alcoholic.....	9,900,600	19,449,569	24,471,006	5,046,531	524,882	3,269,364
Nursery stock.....	239,621	405,270	405,006	2,607,323	4,420,671	5,079,603
Nuts.....	2,144,298	3,585,819	1,972,474	49,930,283	57,510,164	59,659,019
Oilcake and meal.....	2,785,450	36,040,691	18,011,549	1,764,574	2,370,827	4,415,249
Oil, vegetable.....	29,418,708	100,350,904	59,005,308	110,908,782	130,000,165	113,489,771
Opium, crude.....				2,675,963	8,279,653	1,311,625
Rice, rice flour, meal, etc.	12,424,710	34,775,622	37,460,175	23,488,468	12,241,631	14,085,728
Sago, tapioca, etc.....				3,993,221	5,207,972	5,928,518
Seeds.....	5,496,450	8,542,411	7,015,763	45,192,743	69,194,929	102,467,114
Spices.....	480,508	588,462	516,171	14,098,998	9,803,673	11,641,933
Starch.....	2,778,028	15,562,165	8,945,524	2,108,260	242,909	1,016,796
Sugar, molasses, and sirup.....	30,241,699	126,347,952	100,138,702	252,689,604	398,457,408	1,022,282,044
Tea.....				29,539,740	20,145,864	24,392,427
Tobacco.....	122,918,151	259,988,764	245,732,460	54,080,496	75,145,564	81,630,011
Vanilla beans.....				1,195,632	2,407,093	2,406,335
Vegetables.....	38,616,058	47,832,634	32,784,416	32,688,645	40,645,256	40,420,325
Wax, vegetable.....				3,681,635	3,809,635	2,168,410
Other vegetable matter.....	4,791,451	6,048,106	4,963,461	394,990	60,252	785,963
Total vegetable matter.....	1,777,684,959	2,880,257,480	2,858,971,950	1,007,665,250	1,397,577,625	2,200,847,652
Total farm products.....	2,756,664,721	4,107,158,753	3,466,619,819	1,671,196,058	2,392,880,382	3,011,368,157
FOREST PRODUCTS.						
Cork wood or cork bark.....				1,898,193	1,802,506	2,725,008
Dye woods and extracts of	1,551,380	1,855,936	2,605,060	1,923,749	1,066,238	2,427,283
Gums.....				170,722,432	251,944,196	300,203,574
Naval stores.....	10,235,981	31,433,997	34,503,389			
Tanning materials, n.e.s.	3,144,649	5,645,875	3,696,356	6,738,920	9,159,245	11,311,058
Wood.....	69,228,405	107,998,339	146,735,936	64,728,468	71,187,028	111,170,275
Wood pulp.....	1,733,872	3,048,491	2,947,267	31,477,175	37,048,381	89,418,185
Other forest products.....	2,127,617	841,642	1,359,543	2,115,572	2,247,828	4,076,827
Total forest products.....	88,021,904	150,324,280	191,847,551	279,604,509	374,455,432	521,332,215
Total farm and forest products.....	2,844,686,625	4,257,483,033	3,658,467,370	1,950,800,567	2,767,335,814	3,532,700,372

TABLE 387.—Exports of selected domestic agricultural products, 1852-1920.

[Compiled from reports of Foreign Commerce and Navigation of the United States. Where figures are lacking, either there were no exports or they were not separately classified for publication. "Beef salted or pickled," and "Pork, salted or pickled," barrels, 1851-1865, were reduced to pounds at the rate of 200 pounds per barrel, and vires, 1855-1865, at the rate of 300 pounds per tierce; cottonseed oil, 1910, pounds reduced to gallons at the rate of 7.5 pounds per gallon. It is assumed that 1 barrel of corn meal is the product of 4 bushels of corn, and 1 barrel of wheat flour the product of 5 bushels of wheat prior to 1880 and 4½ bushels of wheat in 1880 and subsequently.]

[In round thousands, i. e., 000 omitted.]

Year ending June 30—	Cattle.	Cheese.	Packing-house products.							
			Beef, cured— salted or pickled.	Beef, fresh.	Beef oils— oleo oil.	Beef tallow.	Beef and its prod- ucts— total, as far as ascertain- able. ¹	Pork, cured— bacon.	Pork, cured— hams and should- ers.	Pork, cured— salted or pickled.
Average:	Thou- sands.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.
1852-1856.....	1	6, 200	25, 981	.....	.....	7, 469	33, 449	30, 005	.....	40, 543
1857-1861.....	20	13, 090	26, 936	.....	.....	13, 215	40, 200	30, 583	.....	34, 854
1862-1866.....	7	42, 683	27, 663	.....	.....	43, 203	70, 865	10, 797	.....	52, 551
1867-1871.....	.....	52, 881	26, 955	.....	.....	27, 578	54, 532	45, 790	.....	28, 879
1872-1876.....	46	87, 174	35, 827	.....	.....	78, 994	114, 821	313, 402	.....	60, 429
1877-1881.....	127	129, 670	40, 175	69, 601	.....	96, 823	218, 710	643, 634	.....	85, 963
1882-1886.....	132	108, 790	47, 401	97, 328	20, 276	48, 745	225, 626	355, 905	47, 635	72, 355
1887-1891.....	244	86, 355	65, 614	126, 448	50, 482	91, 608	411, 798	419, 935	60, 697	73, 985
1892-1896.....	349	66, 006	64, 899	207, 373	102, 639	56, 977	507, 177	438, 848	96, 107	64, 827
1897-1901.....	415	46, 109	52, 242	305, 626	139, 373	86, 082	637, 263	536, 287	200, 853	112, 788
1902-1906.....	508	19, 244	59, 208	272, 148	156, 925	59, 893	622, 842	292, 722	206, 062	116, 823
1907-1911.....	254	9, 152	46, 187	144, 800	170, 520	66, 356	448, 024	209, 005	189, 003	90, 810
1912-1916.....	35	22, 224	31, 440	86, 135	99, 592	24, 476	231, 576	306, 012	203, 076	52, 916
1901.....	459	39, 814	55, 313	351, 748	161, 651	77, 167	705, 105	456, 123	216, 572	133, 644
1902.....	393	27, 203	48, 633	301, 824	138, 546	34, 066	593, 255	383, 151	227, 653	115, 896
1903.....	402	18, 987	52, 801	254, 796	126, 010	27, 369	546, 055	267, 336	214, 133	95, 287
1904.....	593	22, 335	57, 585	299, 580	165, 184	76, 924	663, 147	219, 666	194, 949	112, 235
1905.....	568	10, 134	55, 935	236, 487	145, 228	68, 537	575, 875	262, 247	203, 459	118, 857
1906.....	534	16, 562	81, 088	268, 054	209, 658	97, 567	732, 885	361, 211	194, 211	141, 821
1907.....	423	17, 255	62, 645	231, 652	195, 337	127, 858	639, 752	250, 419	209, 481	166, 427
1908.....	349	8, 439	46, 958	201, 154	212, 541	91, 398	579, 303	241, 190	221, 770	149, 506
1909.....	208	6, 823	44, 494	122, 953	179, 985	53, 332	418, 844	244, 579	212, 170	52, 355
1910.....	139	2, 847	36, 554	75, 730	126, 092	29, 380	236, 296	152, 163	146, 885	40, 032
1911.....	150	10, 367	40, 284	42, 511	133, 697	29, 513	265, 924	156, 675	157, 709	45, 729
1912.....	106	6, 338	38, 085	15, 264	126, 467	39, 451	233, 925	208, 574	204, 044	56, 321
1913.....	25	2, 599	25, 857	7, 302	92, 850	30, 586	170, 208	200, 994	159, 545	53, 749
1914.....	18	2, 428	23, 266	6, 394	97, 017	15, 813	151, 212	193, 964	165, 882	45, 543
1915.....	5	55, 363	31, 875	170, 441	80, 482	20, 240	394, 981	346, 718	203, 701	45, 656
1916.....	21	44, 394	38, 115	231, 214	102, 646	16, 289	457, 556	579, 809	282, 209	63, 461
1917.....	13	66, 050	58, 054	197, 177	67, 110	15, 209	422, 674	667, 152	266, 657	46, 993
1918.....	18	44, 303	54, 468	370, 033	56, 603	5, 015	600, 132	815, 294	419, 572	33, 222
Calendar year:										
1918.....	17	48, 405	44, 206	514, 342	69, 106	4, 223	792, 793	1,104,783	537, 213	36, 672
1919.....	70	14, 160	42, 805	174, 427	75, 585	38, 954	429, 432	1,190,297	596, 796	34, 114
1920.....	85	16, 292	25, 771	89, 649	74, 368	20, 692	268, 317	636, 676	185, 247	38, 709

¹ Includes canned, cured, and fresh beef, oleo oil, oleomargarine, tallow, and stearin from animal fats.

TABLE 387.—Exports of selected domestic agricultural products, 1852-1920—Continued.

Year ending June 30—	Packing-house products.			Apples, fresh.	Corn and corn meal (in terms of grain). ¹	Cotton.	Glucose and grape sugar.	Corn- oil cake and oil- cake meal.	Cotton seed oil- cake and oil- cake meal.
	Pork— lard.	Pork and its prod- ucts— total, as far as ascertain- able. ¹	Lard com- pounds.						
Average:	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 barrels.	1,000 bushels.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.
1852-1856...	33,355	103,903	.....	37	7,123	1,110,498	.....	.....	.....
1857-1861...	37,966	103,404	.....	57	6,558	1,125,715	.....	.....	.....
1862-1866...	89,128	252,456	.....	119	12,060	137,532	.....	.....	.....
1867-1871...	53,579	128,249	.....	.....	9,924	902,410	.....	.....	.....
1872-1876...	194,198	568,029	.....	133	38,561	1,248,805	.....	.....	.....
1877-1881...	331,458	1,075,793	.....	510	88,190	1,738,892	.....	.....	.....
1882-1886...	263,425	739,456	.....	402	49,992	1,068,178	4,474	.....	.....
1887-1891...	281,389	936,248	.....	523	54,606	2,439,650	27,036	.....	.....
1892-1896...	451,547	1,052,134	.....	521	63,980	2,736,655	125,574	.....	.....
1897-1901...	632,418	1,528,139	21,792	780	192,531	3,447,910	201,380	.....	1,005,100
1902-1906...	592,131	1,242,137	52,954	1,369	74,615	3,632,268	154,827	21,888	1,066,790
1907-1911...	519,746	1,028,997	75,765	1,226	56,568	4,004,770	145,065	61,723	989,738
1912-1916...	487,056	1,109,488	62,221	1,786	38,774	4,469,202	183,141	54,361	1,151,609
1901.....	611,358	1,462,370	23,360	884	181,405	3,359,062	204,210	12,703	1,258,687
1902.....	556,710	1,347,316	36,202	460	28,029	3,528,975	120,420	14,740	1,050,466
1903.....	490,756	1,042,120	46,130	1,656	76,639	3,569,142	126,240	8,066	1,100,393
1904.....	561,303	1,145,255	51,604	2,018	58,222	3,089,856	152,769	14,015	820,349
1905.....	610,239	1,220,632	61,215	1,500	90,293	4,329,322	175,251	24,171	1,251,908
1906.....	741,517	1,464,960	67,621	1,209	119,894	3,634,045	189,655	48,421	1,110,835
1907.....	627,560	1,268,065	80,149	1,539	86,368	4,518,217	151,629	56,809	1,340,967
1908.....	603,414	1,237,211	75,183	1,050	55,064	3,810,999	129,687	61,128	929,287
1909.....	528,723	1,053,142	75,183	886	37,665	4,447,985	112,225	51,234	1,233,750
1910.....	362,928	707,110	74,557	922	38,128	3,209,708	149,820	49,109	640,089
1911.....	476,108	879,455	73,754	1,721	65,615	4,033,941	181,963	83,585	804,597
1912.....	532,256	1,071,952	62,523	1,456	41,797	5,535,125	171,156	72,490	1,208,690
1913.....	519,025	984,697	67,457	2,150	50,780	4,562,236	200,149	76,263	1,128,092
1914.....	481,458	921,913	58,304	1,507	10,726	4,760,941	199,531	59,031	799,97
1915.....	475,532	1,106,180	69,981	2,352	50,668	4,403,578	158,463	45,026	1,479,065
1916.....	427,011	1,462,697	52,843	1,463	39,897	3,084,070	186,406	18,966	1,057,222
1917.....	444,770	1,301,948	56,359	1,740	66,753	3,088,081	214,973	15,758	1,150,160
1918.....	392,506	1,692,124	31,278	635	49,073	2,320,512	97,858	458	44,681
Calendar year:									
1918.....	548,818	2,251,033	43,977	580	47,059	2,118,175	57,332	69	11,667
1919.....	760,902	2,638,721	124,963	1,712	16,002	3,367,678	255,618	964	628,133
1920.....	612,250	1,836,894	32,051	1,798	21,230	3,170,313	162,496	131	340,045

¹ Includes canned, fresh, salted or pickled pork, lard, neutral lard, lard oil, bacon, and hams.

TABLE 387.—Exports of selected domestic agricultural products, 1852-1920—Continued.

Year ending June 30—	Prunes.	Tobacco.	Hops.	Oils, vegeta- ble— cotton- seed oil.	Rice and rice bran, meal, and polish.	Sugar, raw and refined.	Wheat.	Wheat flour.	Wheat and wheat flour (in terms of grain).
	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 gallons.	1,000 pounds.	1,000 pounds.	1,000 bushels	1,000 barrels.	1,000 bushels.
Average:									
1852-1856.....	140,184	1,163	56,515	7,730	4,715	2,992	19,173		
1857-1861.....	167,711	2,216	65,732	6,015	12,378	3,318	28,970		
1862-1866.....	110,208	4,719	2,258	3,008	22,530	3,531	40,184		
1867-1871.....	194,754	6,487	1,857	4,357	22,107	2,585	35,032		
1872-1876.....	241,848	3,446	391	20,142	48,958	3,415	66,037		
1877-1881.....	266,315	10,446	4,498	602	41,718	107,781	5,376	133,263	
1882-1886.....	237,942	9,534	3,468	561	107,130	82,884	8,620	121,675	
1887-1891.....	259,248	7,184	7,121	3,210	75,074	64,729	11,287	115,529	
1892-1896.....	281,736	15,147	15,753	10,278	13,999	99,914	15,713	170,624	
1897-1901.....	304,402	15,467	42,863	18,407	11,214	120,247	17,151	197,427	
1902-1906.....	43,551	325,539	11,476	38,606	45,978	14,807	70,527	15,444	140,625
1907-1911.....	47,639	324,366	14,774	38,784	27,195	61,430	62,555	11,841	116,133
1912-1916.....	72,589	408,006	18,533	39,801	60,043	470,729	120,415	13,185	188,748
1901.....	10,022	315,788	14,964	49,357	25,328	8,575	152,001	18,651	255,910
1902.....	29,850	301,007	10,715	33,013	29,591	7,572	154,556	17,759	234,773
1903.....	66,385	368,184	7,795	35,643	19,750	10,520	114,181	19,716	202,906
1904.....	78,146	311,972	10,986	29,014	29,122	15,419	44,230	16,993	120,728
1905.....	54,994	334,302	14,859	51,536	113,263	18,348	4,394	8,826	14,113
1906.....	24,870	312,227	13,027	43,794	38,142	22,176	34,973	13,919	97,609
1907.....	44,400	340,743	16,810	41,880	30,174	21,238	76,569	15,585	140,700
1908.....	28,148	330,813	22,920	41,020	28,444	25,511	100,371	13,927	163,044
1909.....	22,602	287,601	10,447	51,087	20,511	79,916	66,923	10,521	114,298
1910.....	89,015	357,196	10,589	29,861	26,779	125,507	46,630	9,041	87,364
1911.....	51,031	355,327	13,105	30,069	30,063	54,947	24,720	10,129	69,312
1912.....	74,228	379,845	12,191	53,263	39,447	79,594	30,160	11,006	79,689
1913.....	117,951	418,797	17,591	42,031	33,903	45,995	91,603	11,375	112,890
1914.....	69,814	449,750	24,263	25,728	22,414	50,896	92,394	11,821	145,500
1915.....	43,479	348,346	16,210	42,449	77,480	549,007	259,643	16,183	332,465
1916.....	57,423	443,293	22,410	35,535	121,967	1,630,151	173,274	15,521	273,117
1917.....	59,645	411,599	4,825	21,188	181,372	1,248,908	149,531	11,943	207,574
1918.....	32,927	289,171	3,495	18,437	196,363	576,483	34,119	21,880	100,579
Calendar year:									
1918.....	22,888	406,827	3,670	15,876	167,933	407,296	111,177	21,707	268,857
1919.....	108,208	776,678	20,798	25,751	376,876	1,475,408	148,086	26,450	267,111
1920.....	75,139	479,900	25,624	24,634	392,613	924,192	218,287	19,854	397,630

TABLE 388.—Imports of selected agricultural products, 1852-1920.

[Compiled from reports of Foreign Commerce and Navigation of the United States. Where figures are lacking, either there were no imports or they were not separately classified for publication. "Silk" includes, prior to 1881, only "Silk, raw or as reeled from the cocoon;" in 1881 and 1882 are included this item and "Silk waste," after 1882, both these items and "Silk cocoons." From "Cocoa and chocolate" are omitted in 1850, 1881, and 1872 to 1881, small quantities of chocolate, the official returns for which were given only in value. "Jute and jute butts" includes in 1888 and 1889 an unknown quantity of "Sisal grass, cor, etc.," and in 1885-1868 an unknown quantity of "Hemp." Cattle hides are included in "Hides and skins other than cattle and goat" in 1895-1897. Olive oil for table use includes in 1882-1884 and 1885-1905 all olive oil. Sisal grass includes in 1884-1890 "Other vegetable substances" Hemp includes in 1885-1888 all substitutes for hemp.]

[In round thousands, i. e., 000 omitted.]

Year ending June 30—	Cheese	Silk.	Wool.	Al- monds.	Argols or wine lees.	Cocoa and choco- late, total.	Coffee.	Corn.	Oats, includ- ing oat- meal.	Wheat.
Average:	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 bush.	1,000 bush.	1,000 bush.
1852-1856.....	1,054	.....	19,067	3,461	.....	2,487	198,583	.....	.....	2,122
1857-1861.....	1,378	.....	.....	3,251	.....	3,064	216,235	.....	.....	2,617
1862-1866.....	.....	.....	.....	2,482	1,355	2,453	124,552	.....	.....	.....
1867-1871.....	.....	682	.....	.....	2,361	3,503	248,726	75	.....	1,266
1872-1876.....	.....	1,095	.....	.....	4,951	4,857	307,007	57	1,515	1,808
1877-1881.....	.....	1,922	62,744	.....	12,403	6,315	384,282	42	1,126	871
1882-1886.....	.....	4,673	83,294	.....	17,552	11,568	529,579	24	.....	507
1887-1891.....	8,335	6,564	117,764	5,861	21,434	18,322	509,268	15	118	239
1892-1896.....	9,650	8,383	162,640	7,488	26,470	25,475	597,484	8	105	1,629
1897-1901.....	12,769	10,962	163,979	7,361	24,380	38,209	816,570	4	54	1,274
1902-1906.....	22,106	17,188	193,656	10,921	27,647	70,901	980,119	20	94	873
1907-1911.....	37,603	22,143	199,563	15,297	29,351	113,673	934,333	92	1,050	286
1912-1916.....	47,988	32,212	295,851	17,130	29,256	132,395	1,013,931	5,686	15,383	2,321
1901.....	15,329	10,406	103,584	5,140	28,599	47,620	854,871	5	32	600
1902.....	17,068	14,235	166,577	9,809	29,276	52,879	1,091,004	18	39	119
1903.....	20,671	15,271	177,138	8,142	29,967	65,047	915,086	41	150	1,077
1904.....	22,707	16,723	173,743	9,839	24,572	75,071	995,043	17	184	7
1905.....	23,096	22,357	249,136	11,745	26,282	77,383	1,047,793	15	56	3,103
1906.....	27,287	17,352	201,689	15,009	28,141	84,127	851,669	10	40	58
1907.....	33,819	18,744	203,848	14,234	30,541	97,060	985,321	11	91	375
1908.....	32,531	16,062	125,981	17,145	26,739	86,605	890,610	20	383	342
1909.....	37,548	25,188	266,409	11,029	32,116	132,661	1,019,869	258	6,692	41
1910.....	40,818	29,457	263,928	18,556	28,183	111,071	871,470	118	1,035	164
1911.....	45,569	26,666	137,648	15,523	29,175	140,971	875,367	52	1,107	509
1912.....	46,542	26,585	193,401	17,231	23,661	148,786	885,201	53	1,262	2,039
1913.....	49,383	32,102	195,293	15,671	29,479	143,510	863,131	903	1,724	798
1914.....	63,784	34,546	247,649	19,038	29,793	179,364	1,001,528	12,367	12,274	1,979
1915.....	50,139	31,053	308,083	17,111	28,625	194,734	1,118,691	9,898	1,631	426
1916.....	30,098	41,925	531,828	16,597	34,721	245,579	1,201,104	5,208	1,665	5,703
1917.....	14,482	40,351	372,372	23,424	23,926	340,483	1,319,871	2,267	1,762	24,139
1918.....	9,839	43,681	379,130	23,840	30,267	399,312	1,143,891	3,196	1,591	28,177
Calendar year										
1918.....	7,562	48,721	453,727	27,694	27,687	360,015	1,052,202	1,990	1,444	17,036
1919.....	11,332	55,522	445,892	35,490	25,736	392,365	1,333,564	11,213	1,609	7,911
1920.....	15,994	39,060	259,618	24,854	35,577	344,986	1,297,439	7,784	1,678	35,309
Year ending June 30—	Wheat flour.	Wheat, includ- ing wheat flour.	Flax- seed.	Un- manu- factured tobacco.	Flax.	Hemp.	Hops.	Jute and jute butts.	Licorice root.	
Average:	1,000 barrels.	1,000 bushels.	1,000 bushels.	1,000 pounds.	1,000 long tons.	1,000 long tons.	1,000 pounds.	1,000 long tons.	1,000 pounds.	
1852-1856.....	411	4,178	1,133	5,044	1	2	.....	3	.....
1857-1861.....	.....	2,617	.....	5,154	.....	3	.....	17	1,373	
1862-1866.....	.....	.....	1,037	.....	.....	3	.....	3	1,888	
1867-1871.....	104	1,818	.....	5,631	.....	.....	.....	15	.....
1872-1876.....	74	1,680	2,915	8,886	4	23	.....	49	.....
1877-1881.....	7	906	1,224	7,871	4	22	.....	62	.....
1882-1886.....	2	517	1,541	13,672	6	31	1,619	91	.....
1887-1891.....	3	352	1,833	21,640	7	37	7,772	105	59,275	
1892-1896.....	1	1,634	1,181	25,871	7	5	2,386	84	86,445	
1897-1901.....	1	1,280	404	16,958	7	4	2,382	94	87,476	
1902-1906.....	27	993	234	33,805	9	5	5,206	102	99,543	
1907-1911.....	93	706	3,249	42,813	10	6	6,770	100	96,111	
1912-1916.....	150	2,996	9,227	55,556	9	7	5,839	105	80,459	

¹ Does not include oatmeal.

TABLE 388.—Imports of selected agricultural products, 1852-1920—Continued.

Year ending June 30—	Wheat flour.	Wheat, includ- ing wheat flour.	Flax- seed.	Un- manu- factured tobacco	Flax.	Hemp.	Hops.	Jute and jute butts.	Licorice root.
	1,000 barrels.	1,000 bushels.	1,000 bushels.	1,000 pounds.	1,000 long tons.	1,000 long tons.	1,000 pounds.	1,000 long tons.	1,000 pounds.
1901.....	1	603	1,632	26,851	7	4	2,507	103	100,106
1902.....	(1)	121	477	29,429	8	6	2,505	129	109,077
1903.....	1	1,080	129	34,017	8	5	6,013	80	88,581
1904.....	47	218	213	31,163	10	6	2,758	97	89,463
1905.....	41	3,286	296	33,288	8	4	4,330	98	108,444
1906.....	45	262	52	41,126	9	5	10,114	104	102,152
1907.....	48	590	90	40,899	9	9	6,212	104	66,116
1908.....	40	520	57	35,005	10	6	8,498	108	109,356
1909.....	92	457	594	43,123	10	5	7,387	157	97,743
1910.....	145	816	5,002	46,853	13	6	3,201	68	82,207
1911.....	142	1,147	10,499	48,203	8	5	8,558	65	125,135
1912.....	159	3,414	6,842	54,740	11	5	2,991	101	74,582
1913.....	108	1,282	5,294	67,977	12	8	8,494	125	105,116
1914.....	90	2,384	8,653	61,175	10	9	5,382	106	115,636
1915.....	64	715	10,666	45,809	5	5	11,651	83	65,959
1916.....	330	7,188	14,679	48,078	7	7	676	108	41,003
1917.....	175	24,925	12,394	49,105	8	10	237	113	50,400
1918.....	675	31,215	13,367	86,991	6	7	121	78	26,983
Calendar year:									
1918.....	167	17,788	12,974	90,977	8	4	77	71	27,100
1919.....	17	7,986	14,035	85,986	4	2	467	62	49,892
1920.....	891	39,412	24,641	82,221	7	8	5,949	96	56,226

Year ending June 30—	Manila.	Molasses.	Olive oil, for table use.	Opium, crude	Potatoes.	Rice and mellor, mellor, and broken rice.	Sisal grass.	Sugar, raw and refined.	Tea.
	1,000 long tons.	1,000 gallons.	1,000 gallons.	1,000 pounds.	1,000 bushels.	1,000 pounds.	1,000 long tons.	1,000 pounds.	1,000 pounds.
Average:	12	28,489	110	407	407	407	407	407	407
1852-1856.....	12	30,191	114	407	407	407	407	407	407
1857-1861.....	16	34,263	178	129	252	70,893	1	672,637	30,869
1862-1866.....	16	33,322	153	209	216	52,954	1	1,138,465	44,053
1867-1871.....	44,815	175	365	253	72,536	1,614,055	62,436	62,436	62,436
1872-1876.....	32,639	219	408	1,850	62,615	1,700,508	67,583	67,583	67,583
1877-1881.....	35,020	392	2,835	99,871	2,458,490	74,781	74,781	74,781	74,781
1882-1886.....	30,543	758	475	3,876	156,859	40	3,003,284	84,275	84,275
1887-1891.....	47	15,475	774	529	1,305	180,808	50	3,827,790	92,782
1892-1901.....	47	6,321	909	538	495	155,232	70	3,916,434	86,809
1902-1906.....	61	17,192	1,783	538	2,662	150,914	97	3,721,782	86,678
1907-1911.....	67	24,147	3,897	490	1,907	215,802	102	3,997,156	96,743
1912-1916.....	64	54,144	6,042	399	3,638	250,775	180	4,993,125	98,841
1901.....	41	11,438	983	583	372	117,200	70	3,975,006	89,806
1902.....	56	11,371	1,335	534	7,656	137,659	70	3,031,916	75,579
1903.....	62	17,240	1,494	517	359	169,650	87	4,216,108	108,575
1904.....	66	18,829	1,714	573	3,167	154,222	100	3,700,624	112,906
1905.....	62	19,478	1,923	585	181	106,484	100	3,680,933	102,707
1906.....	59	16,021	2,447	469	1,948	166,548	98	3,979,331	93,622
1907.....	55	24,631	3,450	565	177	209,603	99	4,391,840	86,368
1908.....	52	18,883	3,799	286	404	212,783	101	3,371,997	94,150
1909.....	62	22,093	4,129	517	8,384	222,900	91	4,189,421	114,917
1910.....	93	31,292	3,702	449	353	225,401	100	4,094,546	85,626
1911.....	74	23,838	4,406	630	219	208,775	118	3,937,978	102,564
1912.....	69	28,828	4,837	400	13,735	190,063	114	4,104,618	101,407
1913.....	74	33,927	5,221	508	327	222,104	154	4,740,041	94,813
1914.....	50	51,410	6,218	455	3,646	300,195	216	5,066,822	91,131
1915.....	51	70,840	6,711	484	271	277,191	196	5,420,982	96,988
1916.....	79	85,717	7,224	147	210	264,324	229	5,633,162	109,866
1917.....	77	110,238	7,533	87	3,079	216,049	143	5,332,746	103,364
1918.....	86	130,731	2,538	158	1,180	456,059	150	4,903,327	151,315
Calendar year:									
1918.....	79	141,339	171	160	1,201	553,048	152	5,170,976	134,418
1919.....	69	120,156	9,024	730	5,544	174,566	145	7,023,620	80,963
1920.....	67	160,208	4,079	211	6,062	142,951	181	8,073,760	90,247

¹ Less than 500

TABLE 388.—Imports of selected agricultural products, 1852-1920—Continued.

Year ending June 30—	Beeswax.	Onions.	Plums and prunes.	Raisins.	Currants.	Dates.	Figs.
	1,000 pounds.	1,000 bushels.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.
Average:							
1887-1891.....	129	.....	60,238	28,546	.....	.....	9,784
1892-1896.....	280	.....	12,406	17,746	34,353	14,914	10,117
1897-1901.....	265	628	561	7,670	27,520	15,654	8,920
1902-1906.....	457	924	564	7,345	35,457	25,649	14,335
1907-1911.....	846	1,103	.....	5,283	35,259	26,059	19,848
1912-1916.....	1,406	997	.....	2,845	30,350	29,922	16,564
1901.....	214	774	746	3,861	16,049	20,014	9,934
1902.....	409	796	522	6,684	36,239	21,681	11,087
1903.....	489	926	634	6,716	33,878	43,815	16,482
1904.....	425	1,171	494	6,868	33,348	21,058	13,178
1905.....	374	856	672	4,042	31,743	19,257	13,364
1906.....	588	873	497	12,415	37,078	22,436	17,562
1907.....	917	1,126	323	3,907	38,393	31,271	24,346
1908.....	672	1,275	335	9,132	33,633	21,058	18,837
1909.....	765	575	296	5,794	32,482	21,869	15,256
1910.....	972	1,024	.....	5,043	33,326	22,694	17,362
1911.....	903	1,515	.....	2,479	33,440	29,505	23,460
1912.....	1,077	1,436	.....	3,266	34,131	25,208	18,765
1913.....	829	789	.....	2,580	30,811	34,395	16,838
1914.....	1,412	1,115	.....	4,553	32,033	31,074	19,285
1915.....	1,505	829	.....	2,809	30,351	24,949	20,780
1916.....	2,146	816	.....	1,024	25,273	31,075	7,153
1917.....	2,686	1,768	.....	1,850	10,477	25,485	16,480
1918.....	1,827	1,513	.....	844	5,168	5,573	10,473
Calendar year:							
1918.....	1,558	261	.....	100	5,091	10,721	11,775
1919.....	2,384	741	.....	1,507	14,852	33,621	25,369
1920.....	4,143	1,819	.....	45,039	55,832	32,547	31,437

Year ending June 30—	Hides and skins, other than furs.			Macaroni, vermi- cell and all similar prepara- tions.	Lemons.	Oranges.	Walnuts.
	Cattle.	Goat.	Other than cat- tle and goat.				
	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.
Average:							
1897-1901.....	.....	68,053	91,173	.....	.....	.....	.....
1902-1906.....	126,995	93,675	115,562	.....	133,461	41,105	.....
1907-1911.....	178,682	94,330	143,351	99,724	153,343	12,344	30,981
1912-1916.....	313,508	88,711	188,888	82,838	148,528	10,941	34,275
1901.....	129,175	73,746	77,990	.....	148,515	50,333	.....
1902.....	148,628	85,039	89,458	.....	164,075	52,742	.....
1903.....	131,644	85,111	102,340	28,788	152,004	56,872	12,363
1904.....	86,370	86,339	103,025	40,224	171,923	35,893	23,671
1905.....	119,177	97,804	126,894	53,441	130,084	28,881	21,684
1906.....	156,155	111,097	158,045	77,926	138,717	31,134	24,917
1907.....	134,671	101,202	135,111	87,721	157,860	21,287	32,598
1908.....	98,353	63,641	120,771	97,234	178,490	18,397	28,887
1909.....	192,232	104,048	148,254	83,114	135,184	8,436	26,158
1910.....	318,004	115,845	174,771	113,773	160,215	4,676	33,641
1911.....	150,128	86,914	137,850	114,779	134,969	7,672	33,619
1912.....	251,013	95,341	191,415	108,231	145,639	7,629	37,214
1913.....	268,042	96,250	207,901	106,501	151,416	12,253	26,662
1914.....	279,963	84,759	196,348	126,129	.....	.....	37,196
1915.....	334,311	66,547	137,439	56,542	.....	.....	33,446
1916.....	434,178	100,657	208,835	21,790	.....	.....	36,859
1917.....	386,600	105,640	207,967	3,473	.....	.....	38,725
1918.....	267,500	66,933	98,084	670	.....	.....	23,289
Calendar year:							
1918.....	221,051	62,364	78,476	402	.....	.....	13,011
1919.....	407,282	133,657	203,897	903	.....	.....	31,496
1920.....	275,325	80,205	154,710	805	.....	.....	31,891

1 Two years, 1912-13.

TABLE 389.—Exports and imports of selected forest products, 1853-1920.

[Compiled from reports of Foreign Commerce and Navigation of the United States. Where figures are lacking, either there were no exports or imports, or they were not separately classified for publication.]

Year ending June 30—	Domestic exports.					Imports					
	Lumber.		Rosin.	Spirits of tur- pentine.	Tim- ber, hewn and sawed.	Cam- phor, crude.	Rubber gums, total.	Lumber.		Shellac	Wood pulp
	Boards, deals, and planks. ¹	Staves.						Boards, deals, planks, and other sawed.	Shin- gles.		
Average:	1,000 Mfeet.	1,000 number.	1,000 barrels	1,000 gallons	1,000 Mfeet.	1,000 pounds	1,000 pounds.	1,000 Mfeet.	1,000 M.	1,000 pounds.	1,000 long tons
1851-1856...	129	.....	552	1,369	.....	214	.....	.....	.....	.....	.....
1857-1861...	205	.....	664	2,735	.....	361	.....	.....	.....	.....	.....
1862-1866...	138	.....	60	102	.....	387	.....	.....	.....	634	.....
1867-1871...	139	.....	492	2,693	.....	.....	27,330	.....	.....	.....	.....
1872-1876...	222	.....	846	.....	210	.....	12,631	565	88	.....	.....
1877-1881...	303	.....	.....	7,139	220	1,516	15,611	418	53	.....	.....
1882-1886...	434	.....	1,280	9,302	164	1,959	24,481	578	88	.....	.....
1887-1891...	532	.....	1,534	10,794	296	2,274	33,227	647	184	5,086	37
1892-1896...	616	.....	2,006	14,250	336	1,462	33,672	661	.....	5,818	43
1897-1901...	957	.....	2,478	18,340	491	1,858	52,975	566	.....	8,839	47
1902-1906...	212	51,234	2,453	16,927	556	2,139	75,909	727	772	11,614	131
1907-1911...	1,649	56,182	2,356	16,659	521	2,920	121,504	900	867	14,016	319
1912-1916...	1,914	65,431	2,122	15,674	353	3,529	201,709	1,016	1,045	21,470	317
1901.....	1,102	47,363	2,821	20,241	590	2,176	64,927	491	555	9,699	47
1902.....	943	46,999	2,536	19,178	477	1,831	67,790	696	708	9,065	87
1903.....	1,066	55,879	2,366	16,379	570	2,472	69,312	721	724	11,564	117
1904.....	1,427	47,420	2,585	17,203	604	2,820	74,323	539	770	16,933	146
1905.....	1,283	48,286	2,310	15,895	533	1,904	87,604	711	759	10,701	168
1906.....	1,344	57,586	2,439	15,981	595	1,669	81,109	950	901	15,730	137
1907.....	1,624	51,120	2,561	15,855	640	3,133	106,748	934	881	17,786	213
1908.....	1,548	61,697	2,713	19,533	522	2,814	85,810	791	988	13,362	213
1909.....	1,358	52,583	2,170	17,502	419	1,990	114,599	846	1,058	19,185	274
1910.....	1,684	49,784	2,144	15,588	491	3,007	154,621	1,054	763	29,402	373
1911.....	2,032	65,726	2,190	14,818	532	3,726	145,744	872	643	15,495	492
1912.....	2,337	64,163	2,474	19,599	438	2,155	175,966	905	515	18,743	473
1913.....	2,550	83,006	2,595	21,094	512	3,709	170,747	1,061	569	21,912	593
1914.....	2,405	77,151	2,418	18,901	441	3,477	161,777	929	895	16,720	503
1915.....	1,129	39,297	1,372	9,464	174	3,729	136,122	939	1,487	21,153	588
1916.....	1,177	57,538	1,571	9,310	201	4,574	304,183	1,218	1,769	25,818	507
1917.....	1,612	61,159	1,639	8,842	184	6,885	364,914	1,175	1,924	32,540	699
1918.....	1,068	63,207	1,071	5,095	106	3,638	414,984	1,283	1,878	22,913	591
Calendar year:											
1918.....	1,024	53,374	779	3,717	75	3,474	340,023	1,209	1,798	18,064	516
1919.....	1,311	81,658	1,210	10,672	183	2,694	555,931	1,149	1,987	21,426	564
1920.....	1,561	82,584	1,164	9,488	171	3,833	590,464	1,351	1,964	28,587	569

¹ Including "Joists and scantling" prior to 1884.² Includes "Gutta-percha" only for 1867.

TABLE 390.—Trade of the United States with Hawaii and Porto Rico in selected domestic farm products, 1918-1920.

[These shipments are not included in the domestic exports from or imports into the United States]

SHIPMENTS FROM THE UNITED STATES.

Article.	Hawaii.			Porto Rico.		
	Year ending Dec. 31—					
	1918	1919	1920	1918	1919	1920
Beans and dried peas.....bushels..	8,539	10,558	17,142	207,422	363,738	495,385
Dairy products.....pounds..	3,575,998	5,054,231	6,045,552	5,584,422	5,392,805	9,272,439
Rice.....do.....	7,565,857	15,575,417	17,192,467	82,263,122	163,949,679	153,820,633
Sugar, refined.....do.....	176,011	1,102,075	2,920,531	194,926	806,282	3,832,453
Tobacco, unmanufactured.....pounds..				1,143,793	803,638	7,391,631

SHIPMENTS TO THE UNITED STATES.

Coffee.....pounds..	4,485,843	3,144,351	1,885,703	292,879	667,318	418,127
Grapefruit.....boxes..				445,083	401,174	412,644
Molasses and sirup,gallons..	12,492,091	9,882,567	12,126,132	14,071,657	15,554,493	20,770,640
Oranges.....boxes..				500,020	355,226	253,387
Sugar, raw.....pounds..	1,009,749,843	1,153,904,433	1,099,627,131	801,329,419	723,391,059	826,108,162
Tobacco, unmanufactured.....pounds..	20,643	17,032		15,620,562	18,467,967	17,990,512

TABLE 391.—Destination of principal farm products exported from the United States, 1918-1920.

Article and country to which consigned.	Quantity.			Per cent of total.		
	Year ending Dec. 31—			Year ending Dec. 31—		
	1918	1919	1920	1918	1919	1920
ANIMAL MATTER.						
Cattle:	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
Belgium.....		9,067	29,300		13.0	34.3
Canada.....	7,314	11,192	4,624	42.3	16.0	5.4
Cuba.....	1,333	13,943	20,766	7.7	20.0	24.3
Mexico.....	7,885	23,923	27,753	45.6	34.2	32.5
United Kingdom.....			100			.1
Other countries.....	748	11,734	2,754	4.4	16.8	3.4
Total.....	17,280	69,859	85,302	100.0	100.0	100.0
Horses:						
Belgium.....		1,069	103		5.4	.7
Canada.....	13,032	9,843	7,062	25.5	50.0	49.2
Cuba.....	2,930	737	2,200	5.7	3.7	15.3
Mexico.....	749	5,438	3,285	1.5	27.6	22.9
United Kingdom.....	33,547	98	356	65.6	.5	2.5
Other countries.....	912	2,501	1,332	1.7	12.8	9.4
Total.....	51,170	19,691	14,338	100.0	100.0	100.0
Butter:	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>			
Belgium.....	40,000	2,856,293	5,214,778	.2	8.3	29.8
Canada.....	12,518	274,893	856,150	.1	.8	4.9
Central American States and British Honduras.....	521,152	666,713	861,781	2.0	1.9	4.9
Mexico.....	313,615	429,603	793,596	1.2	1.2	4.6
United Kingdom.....	22,250,115	21,817,613	3,893,845	84.9	63.1	22.3
Venezuela.....	2,970	35,563	25,170	(4)	.1	.1
West Indies and Bermuda.....	1,775,416	2,249,201	2,878,808	6.8	6.5	16.5
Other countries.....	1,278,629	6,226,601	2,954,607	4.8	13.1	16.9
Total.....	26,194,415	34,556,485	17,437,735	100.0	100.0	100.0

Less than 0.05 of 1 per cent.

TABLE 391.—*Destination of principal farm products exported from the United States, 1918-1920—Continued.*

Article and country to which consigned.	Quantity.			Per cent of total.		
	Year ending Dec. 31—			Year ending Dec. 31—		
	1918	1919	1920	1918	1919	1920
ANIMAL MATTER—continued.						
Beef, canned:	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
Danzag and Poland.....	.....	.....	16,722,800	.....	.....	70.4
United Kingdom.....	51,250,973	13,947,951	1,795,554	36.2	25.9	7.6
Other countries.....	90,206,190	39,919,376	5,247,646	63.8	74.1	22.0
Total.....	141,457,163	53,867,327	23,766,000	100.0	100.0	100.0
Beef, fresh:						
Belgium.....	105,000	23,469,602	35,205,492	(1)	13.5	39.3
Germany.....	.....	31,083,572	26,159,680	.....	17.8	29.2
Italy.....	8,877,471	21,375,475	211,447	1.7	12.3	.2
Netherlands.....	.....	13,708,452	15,922,196	.....	7.9	17.8
Panama.....	257,386	51,950	86,537	.1	(1)	.1
United Kingdom.....	466,040,785	73,073,602	5,699,488	90.6	41.9	6.4
Other countries.....	35,920,907	11,664,346	6,361,308	7.6	6.6	7.0
Total.....	514,341,529	174,426,099	89,649,148	100.0	100.0	100.0
Beef, pickled and other cured.						
Canada.....	2,044,979	1,373,555	2,016,022	4.6	3.2	7.8
Germany.....	.....	2,567,542	1,604,050	.....	6.0	6.2
Netherlands.....	.....	2,325,748	1,700,784	.....	5.4	6.6
Newfoundland and Labrador.....	5,418,221	5,676,761	5,596,298	12.3	12.3	21.7
United Kingdom.....	3,228,816	5,569,743	4,210,631	7.3	13.0	16.3
West Indies and Bermuda.....	1,680,183	1,404,620	3,764,361	3.8	3.3	14.6
Other countries.....	31,823,821	23,886,757	6,579,030	72.0	55.8	26.8
Total.....	44,206,020	42,804,724	25,771,176	100.0	100.0	100.0
Oleo oil:						
Denmark.....	30,000	8,025,918	1,531,297	(1)	10.6	2.1
Germany.....	.....	2,126,704	3,428,958	.....	2.8	4.6
Greece.....	916,517	3,479,879	2,706,173	1.4	4.6	3.6
Netherlands.....	.....	4,811,612	20,107,202	.....	6.4	27.0
Norway.....	.....	8,656,192	10,566,827	.....	11.5	14.2
Sweden.....	2,240,000	3,494,255	3,320,806	3.2	4.6	4.5
Turkey in Europe.....	.....	2,635,801	6,801,573	.....	8.5	9.1
United Kingdom.....	57,783,111	20,791,549	17,593,177	83.6	27.5	23.7
Other countries.....	8,106,722	21,563,254	8,312,332	11.8	28.5	11.2
Total.....	69,106,350	75,585,164	74,365,344	100.0	100.0	100.0
Lard compounds:						
Cuba.....	8,608,423	8,611,137	6,918,010	19.6	6.9	21.6
Mexico.....	6,886,888	4,620,050	6,217,160	15.7	3.7	19.4
United Kingdom.....	4,315,887	62,739,201	4,005,562	9.9	50.2	12.5
Other countries.....	24,136,232	48,992,562	14,907,696	54.8	39.2	46.5
Total.....	43,977,410	124,962,950	32,051,458	100.0	100.0	100.0
Bacon:						
Belgium.....	67,444,015	90,823,427	35,086,345	6.1	7.6	5.5
Canada.....	24,454,474	34,253,107	12,473,768	2.1	2.9	2.0
Cuba.....	16,101,298	15,956,931	21,190,518	1.5	1.3	3.3
Denmark.....	.....	39,039,833	6,642,314	.....	3.3	1.0
France.....	98,496,402	178,431,224	25,040,866	8.9	15.0	3.9
Germany.....	.....	53,449,684	76,035,297	.....	4.5	11.9
Italy.....	98,079,060	48,128,149	18,844,011	8.9	4.0	3.0
Netherlands.....	.....	112,028,898	61,759,267	.....	9.4	9.7
Norway.....	.....	26,152,222	6,760,290	.....	2.2	1.1
Sweden.....	1,680,601	51,891,124	17,410,673	.2	4.4	2.7
United Kingdom.....	789,253,478	507,184,219	344,555,982	71.4	42.6	54.1
Other countries.....	9,278,843	32,958,476	10,875,311	.9	2.8	1.8
Total.....	1,104,788,081	1,190,297,494	636,675,572	100.0	100.0	100.0

¹ Less than 0.05 of 1 per cent.

TABLE 391.—*Destination of principal farm products exported from the United States, 1918-1920—Continued.*

Article and country to which consigned.	Quantity.			Per cent of total.		
	Year ending Dec. 31—			Year ending Dec. 31—		
	1918	1919	1920	1918	1919	1920
ANIMAL MATTER—continued.						
Hams and shoulders, cured:	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
Belgium.....	5,853,423	30,054,740	6,596,959	1.1	5.0	3.6
Canada.....	11,112,784	7,457,307	6,354,128	2.1	1.2	3.4
Cuba.....	8,707,061	9,863,103	15,612,342	1.6	1.7	8.4
France.....	30,336,829	103,201,727	26,209,161	5.6	17.3	14.1
Italy.....	7,102,044	65,245,793	8,236,225	1.3	10.9	1.7
United Kingdom.....	470,415,228	338,028,382	116,256,533	87.6	56.6	62.8
Other countries.....	3,685,672	42,944,611	10,981,384	.7	7.3	6.0
Total.....	537,213,041	595,715,693	155,214,155	100.0	100.0	100.0
Lard:						
Belgium.....	116,784,152	155,302,228	55,021,415	21.3	20.5	9.0
Canada.....	2,478,926	5,090,459	12,730,298	.5	.7	2.1
Cuba.....	46,008,414	44,766,460	68,720,975	8.4	5.9	10.7
Denmark.....	75,000	33,505,333	6,329,275	(¹)	4.4	1.0
Ecuador.....	1,339,946	2,407,180	2,897,992	.2	.3	.5
France.....	35,811,676	96,209,935	48,755,791	6.5	12.7	8.0
Germany.....		39,495,017	127,836,003		5.2	20.9
Italy.....	1,145,112	2,403,197	23,153,676	.2	.3	3.8
Mexico.....	15,452,095	7,134,448	17,302,006	2.8	.9	2.8
Netherlands.....		68,596,924	91,297,867		9.0	14.9
Peru.....	1,050,095	944,742	2,413,735	.2	.1	.4
Sweden.....	560,295	24,483,937	5,063,274	.1	3.2	.8
Switzerland.....	12,609,344	32,247,743	1,012,574	2.3	4.2	.3
United Kingdom.....	399,987,014	219,506,542	128,771,842	56.5	28.8	21.0
Other countries.....	5,455,502	28,360,466	29,106,222	1.0	3.8	3.8
Total.....	548,817,901	760,901,611	612,249,951	100.0	100.0	100.0
Lard, neutral:						
Denmark.....		5,415,681	497,480		23.7	2.1
Germany.....		950,837	118,584		4.1	.5
Netherlands.....		9,313,883	2,988,410		40.6	12.9
Norway.....		1,633,325	1,885,917		7.2	8.1
United Kingdom.....	5,333,851	2,000,074	11,255,712	86.2	8.7	61.3
Other countries.....	873,313	3,593,337	3,481,968	13.8	15.7	15.1
Total.....	6,307,164	22,937,137	23,238,071	100.0	100.0	100.0
Pork, pickled:						
British Guiana.....	1,040,430	205,700	901,185	2.8	.6	2.3
Canada.....	14,708,735	8,372,796	15,480,971	40.1	24.5	40.0
Cuba.....	7,659,439	6,560,984	4,773,388	20.9	19.2	12.3
Haiti.....	739,655	461,678	988,996	2.0	1.4	2.5
Newfoundland and Labrador.....	6,303,799	4,833,214	4,548,654	17.2	14.2	12.5
Panama.....	135,720	124,683	240,872	.4	.4	.6
United Kingdom.....	2,102,744	3,378,871	1,902,869	5.7	9.9	4.9
Other countries.....	3,951,138	10,172,949	9,569,606	10.9	29.8	24.9
Total.....	36,671,660	34,113,875	38,708,841	100.0	100.0	100.0
VEGETABLE MATTER.						
Cotton:						
Austria-Hungary.....		48,609,352	22,880,580		1.4	.1
Belgium.....		81,894,621	100,905,512		2.4	3.1
Canada.....	148,561,448	83,405,725	110,328,914	7.0	2.5	3.5
France.....	289,714,337	398,168,968	334,460,950	13.7	11.8	10.5
Germany.....		77,914,351	376,071,263		2.3	11.8
Italy.....	194,528,036	280,849,977	282,851,303	9.2	8.3	8.9
Japan.....	299,728,224	440,520,341	335,934,543	14.2	13.1	10.6
Mexico.....	1,992,554	345,852	23,970,192	.1	(¹)	.8
Netherlands.....		105,261,030	44,457,873		3.1	1.4
Russia, European.....		155,015			(¹)	
Spain.....	122,197,270	126,076,028	145,027,632	5.8	3.7	4.6
Sweden.....	16,550,343	43,099,176	44,055,029	4.8	1.3	1.4
United Kingdom.....	997,866,017	1,619,088,787	1,303,896,422	71.1	48.1	41.0
Other countries.....	47,036,953	62,288,762	74,472,513	2.1	2.0	2.3
Total.....	2,118,175,182	3,367,677,985	3,179,313,336	100.0	100.0	100.0

¹Less than 0.05 of 1 per cent.² Austria, only.

TABLE 391.—*Destination of principal farm products exported from the United States, 1918-1920—Continued.*

Article and country to which consigned.	Quantity.			Per cent of total.		
	Year ending Dec. 31—			Year ending Dec. 31—		
	1918	1919	1920	1918	1919	1920
VEGETABLE MATTER—continued.						
Fruits:						
Apples, dried—	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
Denmark.....	190,700	3,512,035	893,514	8.7	14.2	10.1
France.....	124,700	1,625,439	709,671	5.7	6.6	7.9
Germany.....	.....	10,759	43,258	.....	(1)	.5
Netherlands.....	.....	490,508	1,283,225	.....	2.0	14.5
Sweden.....	185	7,309,782	1,470,766	(1)	29.6	16.3
Other countries.....	1,884,898	11,735,838	4,427,372	85.6	47.6	50.2
Total.....	2,200,483	24,704,359	8,827,806	100.0	100.0	100.0
Apples, fresh—	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>			
Canada.....	331,453	158,859	271,358	57.2	9.3	15.3
Germany.....	.....	8	50	.....	(1)	(1)
United Kingdom.....	125,987	1,208,855	1,250,033	21.7	70.7	64.5
Other countries.....	122,476	343,645	273,270	21.1	20.0	15.2
Total.....	579,916	1,714,367	1,797,711	100.0	100.0	100.0
Apricots, dried—	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>			
Belgium.....	250	1,921,532	344,828	(1)	5.2	3.5
Canada.....	1,809,357	724,844	782,068	84.4	2.0	7.9
Denmark.....	139,832	5,979,130	954,522	2.7	16.1	9.7
France.....	335,100	8,328,333	1,821,002	6.9	22.4	18.4
Germany.....	.....	30,473	28,405	.....	.1	.3
Netherlands.....	.....	1,140,230	150,230	.....	3.1	1.5
United Kingdom.....	1,199,333	7,633,468	4,256,638	22.2	20.6	43.1
Other countries.....	1,775,314	11,355,694	1,542,473	33.8	30.5	15.6
Total.....	5,232,206	37,143,824	9,881,256	100.0	100.0	100.0
Oranges—	<i>Boxes.</i>	<i>Boxes.</i>	<i>Boxes.</i>			
Canada.....	827,529	1,033,421	1,417,001	96.5	91.9	93.3
Other countries.....	29,630	144,047	100,993	3.5	8.1	6.7
Total.....	857,159	1,777,468	1,517,994	100.0	100.0	100.0
Prunes—	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>			
Belgium.....	150	3,172,934	2,005,419	(1)	2.9	2.8
Canada.....	12,772,178	14,519,219	14,903,218	55.8	13.4	19.8
Denmark.....	481,850	13,203,192	1,450,849	2.1	11.3	1.9
France.....	746,459	10,498,370	16,134,922	3.3	9.7	21.5
Germany.....	.....	15,758	323,156	.....	(1)	.4
Netherlands.....	.....	567,668	2,271,370	.....	.5	3.3
Sweden.....	239	15,552,738	1,021,919	(1)	14.4	2.6
United Kingdom.....	4,120,030	29,445,779	27,828,591	18.0	27.2	37.0
Other countries.....	4,767,206	22,229,599	8,133,355	20.8	20.6	11.0
Total.....	22,888,112	108,208,257	75,138,779	100.0	100.0	100.0
Fruits, canned—	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>			
United Kingdom.....	1,811,083	34,359,305	10,915,959	34.1	82.8	59.7
Other countries.....	3,501,736	7,116,317	10,598,314	65.9	17.2	49.3
Total.....	5,312,819	41,475,622	21,514,273	100.0	100.0	100.0
Glucose and grape sugar:	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>			
Argentina.....	1,793,900	6,341,204	2,837,928	3.1	2.5	1.7
British Oceania.....	108,836	1,246,848	1,803,237	.2	.5	1.2
France.....	3,094,452	52,042,071	25,420	6.9	20.4	(1)
Italy.....	845,537	5,909,980	9,049,194	1.5	2.3	5.6
United Kingdom.....	39,345,968	159,033,298	113,643,769	68.6	62.2	69.9
Other countries.....	11,253,457	31,044,308	35,070,620	19.7	12.1	21.6
Total.....	57,332,150	255,617,709	162,436,168	100.0	100.0	100.0
Grain and grain products:						
Corn—	<i>Busbels.</i>	<i>Busbels.</i>	<i>Busbels.</i>			
Belgium.....	3,467,151	1,009,969	71,787	8.7	9.0	.4
Canada.....	13,228,954	6,542,025	10,004,608	33.2	58.4	53.7
Cuba.....	1,074,099	1,964,540	1,893,793	2.7	17.6	10.7
Denmark.....	.....	334,711	173,357	.....	3.0	1.0
Germany.....	.....	.....	1,323,770	.....	.....	7.5

1 Less than 0.05 of 1 per cent.

TABLE 391.—*Destination of principal farm products exported from the United States, 1918-1920—Continued.*

Article and country to which consigned.	Quantity.			Per cent of total.		
	Year ending Dec. 31—			Year ending Dec. 31—		
	1918	1919	1920	1918	1919	1920
VEGETABLE MATTER—continued.						
Grain and grain products—Contd.						
Corn—Continued.	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
Mexico.....	2,736,239	133,887	770,814	6.9	1.2	4.3
Netherlands.....	46,004	100,168	423,094	1	.9	2.1
United Kingdom.....	15,658,493	948,493	2,706,805	39.2	8.5	15.2
Other countries.....	3,683,151	158,740	332,822	9.2	1.4	1.3
Total.....	39,899,091	11,192,533	17,761,420	100.0	100.0	100.0
Wheat—						
Belgium.....	12,628,183	24,476,490	20,655,729	11.4	16.5	9.5
Canada.....	26,493,421	1,421,613	14,811,672	23.8	1.0	6.8
France.....	6,386,134	27,590,718	26,444,984	5.7	18.0	12.1
Germany.....			8,240,213			3.8
Italy.....	16,337,436	48,244,883	32,116,650	14.7	25.3	14.7
Japan.....			10,141			(1)
Mexico.....	1,594	134,003	209,211	(1)	.1	.1
Netherlands.....	2,236,354	1,962,249	11,912,362	5.0	1.3	5.5
United Kingdom.....	42,145,559	44,818,552	77,338,545	38.8	39.3	37.4
Other countries.....	3,917,449	9,417,962	26,418,127	3.6	6.4	12.1
Total.....	111,177,103	148,956,470	218,287,334	100.0	100.0	100.0
Wheat flour—	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>			
Belgium.....	596	279,564	623,198	(1)	1.1	3.1
Canada.....	110,582	221,340	354,953	.5	.8	1.8
France.....	61,045	7,316	25,250	.3	(1)	.1
China.....	2	3,913	15,946	(1)	(1)	.1
Cuba.....	541,564	1,408,058	1,389,990	2.5	3.3	7.0
Finland.....		41,729	369,165		.2	1.9
Germany.....		42,324	1,077,675		.2	5.4
Haiti.....	378	298,243	361,321	(1)	1.0	1.8
Hongkong.....		10,597	182,926		(1)	1.0
Italy.....	2,929,095	3,008,825	1,410,242	13.5	11.4	7.1
Japan.....		2,328	107,024		(1)	.5
Netherlands.....	105,090	1,082,207	730,913	.5	4.1	3.7
Norway.....	192,086	45,715	160,335	.9	.2	.8
Philippine Islands.....	22	54,904	143,469	(1)	.2	.7
United Kingdom.....	10,013,533	10,440,148	3,435,239	46.1	39.5	17.3
Other countries.....	7,752,797	9,533,824	9,455,705	35.7	30.0	47.7
Total.....	21,706,700	26,449,881	19,853,992	100.0	100.0	100.0
Hops:	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>			
British Oceania.....	319,069	244,487	823,665	8.7	1.2	3.2
Canada.....	749,503	2,483,093	1,983,821	20.4	12.0	7.7
United Kingdom.....	76,424	12,523,653	21,421,599	2.1	60.2	83.6
Other countries.....	2,525,356	5,536,266	1,409,970	68.8	26.6	3.5
Total.....	3,670,352	20,797,504	25,624,055	100.0	100.0	100.0
Oil cake and oil-cake meal:						
Cottonseed—						
Belgium.....		7,824,573	1,138,800		1.2	.3
Denmark.....		200,665,451	247,767,183		31.9	72.9
Germany.....			20,118,977			5.9
Netherlands.....		1,926,445			.3	
Norway.....		35,112,213	9,616,175		5.6	2.8
Sweden.....		103,750,415	41,266,275		16.5	12.1
United Kingdom.....		249,540,669	6,080,586	5.9	39.7	1.8
Other countries.....		29,143,365	14,085,036	94.1	4.8	4.2
Total.....		623,133,166	340,045,982	100.0	100.0	100.0
Linseed or flaxseed—						
Belgium.....		80,622,811	25,904,744		22.8	11.0
Denmark.....		46,023,678	42,135,337		13.0	17.9
France.....		263,546			.1	
Netherlands.....		104,614,268	98,188,316		29.4	41.7
United Kingdom.....		15,422,381	42,425,875	17.9	23.9	18.0
Other countries.....		70,532,001	26,970,705	82.1	10.6	11.4
Total.....		353,751,483	235,624,977	100.0	100.0	100.0

¹Less than 0.05 of 1 per cent.

TABLE 391.—*Destination of principal farm products exported from the United States, 1918-1920—Continued.*

Article and country to which consigned.	Quantity.			Per cent of total.		
	Year ending Dec. 31—			Year ending Dec. 31—		
	1918	1919	1920	1918	1919	1920
VEGETABLE MATTER—continued.						
Oils, vegetable:						
Cottonseed—	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
Argentina.....	922,335	231,314	2,734,813	0.8	0.1	1.5
Austria-Hungary.....			11,940,019			1.1
Belgium.....		1,613,034	3,161,251		.8	1.7
Canada.....	48,116,625	39,662,192	45,053,545	40.4	20.5	24.4
Chile.....	1,604,155	491,621	1,143,985	1.3	.3	.6
Cuba.....	9,805,509	5,102,662	4,358,816	8.2	2.6	2.4
Denmark.....		7,352,315	4,088,712		3.8	2.2
France.....	800,000	7,211,541	8,720,865	.7	3.7	4.7
Germany.....		11,563	2,257,311		(²)	1.8
Italy.....	1,966,500	9,551,748	22,976,091	1.7	4.9	12.4
Mexico.....	651,720	495,049	2,802,789	.5	.3	1.5
Netherlands.....		30,377,990	34,622,804		15.7	18.7
Norway.....		15,626,944	13,530,457		8.1	7.3
Rumania.....		25,020	562,750		(²)	.3
Sweden.....	672,030	13,112,629	1,077,366	.6	6.8	.6
Turkey, European.....		1,274,043	6,156,506		.7	3.3
United Kingdom.....	43,084,025	37,814,421	12,917,081	36.1	19.6	7.0
Uruguay.....	44,730	63,450	2,053,925	(²)	(²)	1.1
Other countries.....	11,449,777	23,115,665	13,850,735	9.7	12.1	7.4
Total.....	119,067,376	193,133,201	184,753,824	100.0	100.0	100.0
Tobacco, leaf, stem, and shavings:						
Belgium.....		51,031,229	29,106,072		6.6	6.1
British Africa.....		14,287,562	12,780,858	2.1	1.8	2.7
British Oceania.....	8,567,544	12,930,832	18,631,090	2.8	1.7	3.9
Canada.....	11,393,314	19,855,703	16,833,784	6.5	2.6	3.5
China.....	26,409,427	14,558,402	18,224,923	3.6	1.9	3.8
France.....	14,581,203	81,739,541	60,396,643	13.1	10.5	12.6
French Africa.....	65,497,745	8,914,372	4,308,751	.7	1.1	.9
Germany.....	2,950,749	4,893,832	18,442,558		.6	3.8
Italy.....		43,623,888	44,187,828	12.4	5.6	9.2
Japan.....	50,337,819	4,230,513	7,130,428	.9	.5	1.5
Netherlands.....	3,723,740	68,584,267	29,143,130		8.8	6.1
Spain.....		24,291,693	3,248,403	2.8	3.1	.7
Sweden.....	11,449,293	13,757,783	14,551,474	1.1	1.8	3.0
Switzerland.....	4,638,371	14,445,161	5,719,659	.2	1.9	.8
United Kingdom.....	900,361	338,872,440	162,763,974	45.1	43.6	33.9
Other countries.....	183,555,420	60,593,737	36,215,547	5.7	7.9	7.5
Total.....	406,826,718	776,678,135	470,900,832	100.0	100.0	100.0
FOREST PRODUCTS.						
Naval stores:						
Rosin—	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>			
Argentina.....	68,632	116,708	136,345	8.8	9.6	11.7
Austria-Hungary.....		2,989	1,179		.2	(²)
Belgium.....		14,623	31,065		1.2	2.7
Brazil.....	97,750	154,513	146,965	12.5	12.8	12.6
Canada.....	140,588	71,316	102,633	18.0	5.9	8.8
Germany.....		98	31,310		(²)	2.7
Italy.....	26	18,470	32,797	(²)	1.5	2.8
Netherlands.....		24,554	11,463		2.0	1.0
Russia, European.....		45			(²)	
United Kingdom.....	191,038	504,489	299,891	24.5	41.7	25.8
Other countries.....	280,993	301,822	371,680	36.2	25.1	31.9
Total.....	779,027	1,209,627	1,164,328	100.0	100.0	100.0
Turpentine, spirits of—	<i>Gallons.</i>	<i>Gallons.</i>	<i>Gallons.</i>			
Argentina.....	183,702	528,391	636,682	4.9	5.0	6.7
Belgium.....		304,811	293,337		2.9	3.1
British Oceania.....		137,611	780,368	21.5	1.3	8.3
Canada.....	1,134,122	969,776	864,297	30.5	9.1	9.1
Germany.....		10,716	71,590		1.1	.8
Netherlands.....		673,653	459,330		6.3	4.9
United Kingdom.....	294,076	6,220,048	5,238,621	7.9	58.3	55.4
Other countries.....	1,304,832	1,827,096	1,114,198	35.2	17.0	11.7
Total.....	3,717,093	10,672,102	9,458,423	100.0	100.0	100.0

¹ Austria only² Less than 0.05 of 1 per cent.

TABLE 391.—Destination of principal farm products exported from the United States, 1918-1920—Continued.

Article and country to which consigned.	Quantity			Per cent of total.		
	Year ending Dec 31—			Year ending Dec. 31—		
	1918	1919	1920	1918	1919	1920
FOREST PRODUCTS—Continued						
Lumber:						
Pine—	<i>M feet.</i>	<i>M feet.</i>	<i>M feet.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
Australia.....	54,958	37,650	72,144	20.2	12.5	16.0
Canada.....	16,557	27,846	10,151	6.1	9.2	2.2
Chile.....	28,488	6,068	23,088	10.5	2.0	5.1
China.....	13,479	49,544	88,567	4.9	16.5	19.6
Japan.....	20,926	27,810	63,165	11.4	9.2	14.0
Mexico.....	6,880	7,879	8,101	2.5	2.6	1.7
New Zealand.....	4,153	3,873	5,055	1.5	1.3	1.1
Panama.....	2,980	18,231	8,372	1.1	6.1	1.8
Peru.....	50,820	33,358	57,086	18.7	11.1	12.7
United Kingdom.....	24,341	40,522	41,032	8.9	13.5	9.1
Other countries.....	38,809	48,363	74,462	14.2	16.0	16.7
Total.....	272,401	301,144	451,223	100.0	100.0	100.0
Oak—						
Argentina.....	2,779	13,105	4,540	4.3	8.3	4.3
Canada.....	44,021	42,799	42,487	68.1	27.1	40.4
France.....	793	2,520	385	1.2	1.6	.4
United Kingdom.....	8,791	70,915	33,615	13.6	44.9	32.0
Other countries.....	8,279	28,598	24,114	12.8	18.1	22.9
Total.....	64,663	157,937	105,141	100.0	100.0	100.0
Pine, yellow, long leaf—						
Argentina.....	17,902	73,978	92,596	6.0	16.9	14.5
Brazil.....	920	1,024	9,902	.3	.2	1.6
Canada.....	1,845	1,106	753	.6	.3	1
Cuba.....	168,753	154,843	254,959	56.3	35.4	40.0
France.....	167	9,408	2,129	.1	2.1	.3
Italy.....	2,670	2,621	2,019	.9	.6	.3
Mexico.....	30,298	34,896	73,865	10.1	8.0	11.6
Panama.....	12,442	7,369	10,511	4.1	1.7	1.6
Spain.....	339	7,797	18,971	.1	1.8	3.0
United Kingdom.....	18,365	66,108	43,589	6.1	15.1	6.8
Uruguay.....	2,019	16,304	18,956	.7	3.7	3.0
Other countries.....	44,202	62,229	108,902	14.7	14.2	17.2
Total.....	299,922	437,773	637,152	100.0	100.0	100.0
Railroad ties:	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>			
Canada.....	1,580,127	1,573,937	922,547	58.9	33.5	21.7
Cuba.....	471,713	319,224	758,039	17.6	6.8	17.9
France.....	29,953	62,543	.....	1.1	1.3	.....
Honduras.....	42,216	54,463	282,027	1.6	1.2	6.6
Mexico.....	317,332	476,970	516,754	11.8	10.1	12.2
United Kingdom.....	19,435	2,001,994	1,229,570	.7	42.6	29.0
Other countries.....	221,047	210,771	537,301	8.3	4.5	12.6
Total.....	2,681,823	4,699,902	4,246,238	100.0	100.0	100.0
Timber, sawed:						
Pitch pine, long leaf—	<i>M feet.</i>	<i>M feet.</i>	<i>M feet.</i>			
Canada.....	532	393	786	1.5	.3	.6
France.....	192	8,433	5,950	.5	5.5	4.4
Italy.....	17,651	5,380	.....	.....	11.4	4.0
United Kingdom.....	19,928	100,133	74,017	55.5	64.9	54.9
Other countries.....	15,240	27,676	48,806	42.5	17.9	36.1
Total.....	35,892	154,186	134,989	100.0	100.0	100.0

TABLE 292.—Origin of principal farm products imported into the United States, 1918-1920.

Article and country of origin.	Quantity.			Per cent of total.		
	Year ending Dec. 31—			Year ending Dec. 31—		
	1918	1919	1920	1918	1919	1920
ANIMAL MATTER.						
Cattle:	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
Canada.....	24,316	550,004	316,559	70.7	85.6	83.5
Mexico.....	100,622	99,541	58,526	28.5	14.1	15.5
Other countries.....	2,653	1,850	3,629	.8	.3	1.0
Total.....	352,601	642,395	379,114	100.0	100.0	100.0
Horses:						
Canada.....	3,386	4,495	4,084	87.5	90.0	91.2
France.....	211	11	25	5.5	.2	.6
Mexico.....	141	412	178	3.6	8.2	4.0
Other countries.....	131	76	189	3.4	1.6	4.2
Total.....	3,869	4,994	4,476	100.0	100.0	100.0
Cheese, including substitutes:	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>			
Argentina.....	6,589,121	5,043,010	9,871,815	87.1	44.5	61.7
Canada.....	100,243	4,731,529	813,001	1.3	41.8	5.1
France.....	542,010	680,867	1,583,110	7.1	6.0	9.9
Italy.....	5,044	373,807	985,197	.1	3.3	6.2
Netherlands.....		4,947	863,405		(¹)	5.4
Switzerland.....		12,354	801,902		.1	5.0
Other countries.....	325,626	485,690	1,075,286	4.4	4.3	6.7
Total.....	7,562,044	11,332,204	15,593,725	100.0	100.0	100.0
Fibers, animal:						
Silk, raw—						
China.....	5,750,902	9,099,492	5,931,863	17.5	20.3	19.7
Italy.....	5,503	1,865,807	1,111,132	(¹)	4.2	3.7
Japan.....	27,074,811	33,726,581	22,903,619	82.4	75.3	76.2
Other countries.....	34,237	125,058	111,770	.1	.2	.4
Total.....	32,865,453	41,816,918	30,053,374	100.0	100.0	100.0
Wool, class 1—						
Argentina.....	203,238,338	113,854,446	71,910,150	54.4	35.6	33.9
Australia.....	65,117,777	46,034,615	37,375,888	17.4	13.8	17.6
Belgium.....		204,210	1,249,498		.1	.6
British South Africa.....	51,063,594	51,466,150	17,298,456	13.7	15.4	8.1
Canada.....	2,717,725	12,069,657	7,628,112	7.7	3.6	3.6
Chile.....	10,886,730	11,959,417	14,314,344	2.9	3.6	6.8
China.....	10,505,686	8,525,362	525,409	2.8	.2	.2
New Zealand.....	6,276,375	14,234,386	25,511	1.7	4.3	(¹)
United Kingdom.....	38,675	14,704,025	28,667,677	(¹)	4.4	13.6
Uruguay.....	17,655,568	49,931,366	29,767,584	4.7	14.9	14.0
Other countries.....	6,410,427	6,115,434	3,134,401	1.7	1.7	1.6
Total.....	373,910,875	334,099,538	222,392,240	100.0	100.0	100.0
Wool, class 2—						
Argentina.....	2,357,025	2,087,101	1,347,667	22.4	14.0	11.9
Canada.....	709,549	650,924	1,194,247	6.7	4.4	1.8
China.....	1,205,567	642,870	2,693,800	11.5	4.3	25.2
United Kingdom.....	60,280	3,385,806	3,063,162	.6	22.8	27.0
Other countries.....	6,192,218	8,081,171	3,881,918	58.8	54.5	34.1
Total.....	10,524,639	14,844,872	11,355,594	100.0	100.0	100.0
Wool, class 3—						
Argentina.....	15,068,215	14,045,112	1,764,692	21.7	14.5	4.9
British East Indies.....	9,575	66,218	365,900	(¹)	.1	1.0
British South Africa.....	4,442,103	2,386,237	3,744,041	6.4	2.5	1.9
Chile.....	8,196,911	13,274,437	3,715,570	11.8	13.7	10.4
China.....	31,198,498	29,813,744	11,762,921	45.0	30.8	32.8
Russia (Asiatic and European).....	2,739,987	1,539,889	2,650,565	4.0	1.6	7.4
Turkey, Asiatic.....		1,353,898	2,810,636		1.4	7.8
Turkey, European.....		2,931,814	2,349,343		3.0	6.5
United Kingdom.....		19,044,860	6,381,616		19.6	17.8
Other countries.....	7,630,569	12,492,475	3,397,23	11.1	12.8	9.5
Total.....	69,291,858	96,948,224	35,870,207	100.0	100.0	100.0

¹Less than 0.05 of 1 per cent.

TABLE 392.—*Origin of principal farm products imported into the United States, 1918-1920*—Continued.

Article and country of origin.	Quantity.			Percent of total.		
	Year ending Dec. 31—			Year ending Dec. 31—		
	1918	1919	1920	1918	1919	1920
ANIMAL MATTER—continued.						
Hides and skins other than furs						
Calfskins—	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
Argentina.....	436,134	4,467,257	2,872,751	5.8	6.9	8.2
Belgium.....		721,686	753,942		1.1	2.1
Canada.....	1,031,069	5,280,116	2,719,199	13.6	8.2	7.7
Denmark.....		4,086,657	2,230,508		6.3	6.4
East Indies.....	3,281,283	21,045,701	7,708,506	43.3	37.2	21.9
France.....	30,947	4,590,533	8,201,685	.4	7.1	21.3
Germany.....			7,003			(¹)
Netherlands.....	863,679	7,737,059	3,108,808	11.4	12.0	8.8
Norway.....		2,012,308	1,361,112		3.1	1.0
United Kingdom.....	12,643	1,664,878	811,420	.2	2.6	2.3
Other countries.....	1,923,968	9,919,206	5,356,829	25.3	15.5	15.4
Total.....	7,582,723	61,555,521	35,132,286	100.0	100.0	100.0
Cattle hides—						
Argentina.....	89,072,009	146,103,225	113,117,808	40.3	35.9	41.1
Belgium.....		17,056	139,018		(¹)	.1
Brazil.....	12,786,697	29,517,585	19,488,375	5.8	7.0	7.1
Canada.....	19,253,175	43,002,218	27,367,282	8.7	10.6	10.0
China.....	5,124,610	7,748,834	4,755,171	2.3	1.9	1.7
Colombia.....	7,522,821	11,979,377	9,977,059	3.1	3.7	3.6
Cuba.....	10,985,264	12,500,002	6,549,229	5.0	3.1	2.4
East Indies.....	1,522,893	11,350,871	9,046,283	.7	3.5	3.3
France.....		7,701,942	7,132,294		1.0	2.6
Italy.....		83,351	1,999,422		(¹)	.7
Mexico.....	22,976,876	26,288,312	7,061,015	10.4	6.5	2.6
Netherlands.....	37,258	4,031,983	2,322,620	(¹)	1.0	.9
United Kingdom.....	27,459	5,370,120	1,907,200	(¹)	1.3	.7
Uruguay.....	35,511,069	48,294,453	25,905,100	16.1	11.9	9.4
Venezuela.....	2,733,236	7,922,391	4,733,777	1.2	1.0	1.7
Other countries.....	13,485,670	39,143,489	33,519,571	6.1	9.6	12.1
Total.....	221,051,070	407,282,271	275,321,507	100.0	100.0	100.0
Goatskins—						
Aden.....	866,760	6,726,235	4,301,269	1.4	5.0	5.4
Africa n. e. s.....	31,172	2,385,158	2,355,373	.1	1.8	2.9
Argentina.....	2,326,191	7,474,366	2,898,427	3.7	5.6	3.6
Brazil.....	2,906,400	6,606,837	4,894,466	4.7	4.9	6.1
British Africa.....	3,190,091	7,931,326	3,938,275	5.1	5.9	4.9
China.....	13,811,654	15,217,301	19,061,548	22.1	11.4	23.8
East Indies.....	32,446,710	62,772,369	29,295,205	52.0	47.0	36.5
France.....	12,630	1,848,224	816,267	(¹)	1.4	1.0
Mexico.....	2,889,589	3,315,986	1,633,663	4.6	2.5	2.0
United Kingdom.....	227,559	4,432,373	1,865,025	.4	3.3	2.3
Venezuela.....	752,546	2,813,980	1,650,788	1.2	2.1	2.1
Other countries.....	2,902,257	12,132,689	7,494,211	4.7	9.1	9.4
Total.....	62,363,549	133,656,814	80,204,637	100.0	100.0	100.0
Sheepskins—						
Aden.....	622,691	2,494,391	1,352,834	1.2	2.9	1.6
Argentina.....	9,087,101	15,674,103	13,679,809	17.3	18.4	15.5
Brazil.....	985,249	3,175,161	2,420,851	1.9	3.7	2.9
British India.....	2,789,044	4,694,998	4,981,618	5.3	5.5	6.0
British Oceania.....	25,000,044	16,933,622	23,880,470	47.7	19.9	28.9
British South Africa.....	5,937,809	7,415,027	4,678,408	11.3	8.7	5.7
Canada.....	798,873	5,341,467	3,111,221	1.5	6.3	3.8
China.....	1,521,008	2,072,754	600,878	2.9	2.4	.7
France.....	248,610	370,094	653,980	.5	.4	.8
Russia, European.....		76,423	40,240		.1	(¹)
United Kingdom.....	373,505	9,971,075	11,950,393	.7	11.7	14.4
Uruguay.....	570,778	2,491,237	810,703	1.1	2.9	1.0
Other countries.....	4,529,639	14,321,467	14,567,561	8.6	17.1	17.7
Total.....	52,464,351	85,031,819	82,748,981	100.0	100.0	100.0

¹ Less than 0.05 or 11 per cent.

TABLE 392.—Origin of principal farm products imported into the United States, 1918-1920—Continued.

Article and country of origin.	Quantity.			Per cent of total.		
	Year ending Dec. 31—			Year ending Dec. 31—		
	1918	1919	1920	1918	1919	1920
VEGETABLE MATTER.						
Cocoa, crude:	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
Brazil.....	66,007,884	69,990,057	60,577,524	18.3	17.9	17.6
British West Africa.....	93,473,106	158,713,898	32,053,130	26.0	40.6	23.9
British West Indies.....	51,535,501	30,199,700	34,642,516	14.3	7.7	10.1
Dominican Republic.....	39,099,255	44,665,321	42,998,532	10.6	11.4	12.5
Ecuador.....	68,920,773	46,404,529	61,178,384	19.1	11.9	17.8
Portugal.....	478,421	1,087,271	12,190,057	.....	.....	3.5
United Kingdom.....	23,318,711	7,257,064	13,464,802	.....	1.9	3.9
Venezuela.....	18,126,110	10,726,250	16,381,647	5.1	2.7	4.8
Other countries.....	.....	22,353,219	20,180,220	.....	5.6	5.9
Total.....	359,959,761	391,397,309	343,666,812	100.0	100.0	100.0
Coffee:						
Brazil.....	599,991,374	787,312,293	785,810,689	57.0	59.0	60.6
Central American States and British Honduras.....	195,259,324	131,638,695	150,200,281	18.6	9.9	12.3
Colombia.....	118,909,462	150,483,853	194,682,616	11.3	11.3	15.0
East Indies.....	4,756,528	56,919,126	28,674,951	.....	4.3	2.2
Mexico.....	19,849,230	29,567,469	19,519,865	1.9	2.2	1.5
Netherlands.....	.....	1,335	1,126,548	.....	(¹)	.....
Venezuela.....	53,654,080	109,777,831	65,970,954	5.1	8.2	5.1
West Indies and Bermuda.....	53,459,694	42,013,841	29,204,734	5.1	3.2	2.3
Other countries.....	6,321,809	25,849,624	13,248,674	.....	1.9	.....
Total.....	1,052,201,501	1,333,564,067	1,297,439,310	100.0	100.0	100.0
Fibers, vegetable:						
Cotton—						
British India.....	1,665,279	4,927,097	7,044,100	1.5	2.8	2.3
Egypt.....	63,521,653	86,485,327	179,394,406	56.4	49.3	60.0
Mexico.....	22,993,541	30,890,061	38,084,625	20.4	17.6	12.7
Peru.....	4,403,303	20,213,172	25,456,455	3.9	11.5	8.5
United Kingdom.....	.....	18,545,720	14,006,601	.....	10.6	4.7
Other countries.....	20,100,816	14,296,991	35,508,191	17.8	8.2	11.8
Total.....	112,684,092	175,358,368	299,994,378	100.0	100.0	100.0
Flax—	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>			
Belgium.....	.....	18	52	.....	4	8
Canada.....	4,583	1,370	3,872	58.3	31.0	57.0
Russia, European.....	2,502	21	385	31.8	7.5	5.7
United Kingdom.....	304	1,510	319	3.9	34.2	4.7
Other countries.....	467	1,501	2,163	6.0	33.9	31.8
Total.....	7,856	4,420	6,791	100.0	100.0	100.0
Jute and jute butts—						
British East Indies.....	71,309	61,966	94,688	99.9	99.4	98.6
Other countries.....	105	366	1,351	.....	.....	1.4
Total.....	71,414	62,332	96,039	100.0	100.0	100.0
Manila fiber—						
Philippine Islands.....	78,305	68,044	66,675	99.4	99.3	98.8
Other countries.....	478	492	791	.....	.....	1.2
Total.....	78,783	68,536	67,466	100.0	100.0	100.0
Sisal grass—						
Mexico.....	139,351	133,591	164,187	91.8	92.4	90.8
Other countries.....	12,525	10,951	16,572	8.2	7.6	9.2
Total.....	151,876	144,542	180,759	100.0	100.0	100.0
Bananas:	<i>Bunches.</i>	<i>Bunches.</i>	<i>Bunches.</i>			
British West Indies.....	3,033,262	6,912,779	7,143,128	9.4	18.7	18.2
Central American States and British Honduras.....	23,470,560	24,293,461	27,006,605	72.8	65.7	68.7
Cuba.....	972,426	1,515,832	1,697,020	3.0	4.1	4.3
South America.....	4,662,004	4,064,940	2,679,154	14.4	11.1	6.8
Other countries.....	120,776	176,083	793,655	.....	.....	2.0
Total.....	32,249,028	36,993,095	39,819,562	100.0	100.0	100.0

¹ Less than 0.05 of 1 per cent.

TABLE 392.—*Origin of principal farm products imported into the United States, 1918-1920—Continued.*

Article and country of origin.	Quantity.			Per cent of total.		
	Year ending Dec. 31—			Year ending Dec. 31—		
	1918	1919	1920	1918	1919	1920
VEGETABLE MATTER—continued.						
Walnuts	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
China.....	1,891,243	7,080,192	6,701,431	14.5	22.5	21.0
France.....	6,552,094	8,519,292	14,718,220	50.4	27.0	46.2
Italy.....	909,196	6,360,433	5,411,393	7.0	20.2	17.0
Turkey, Asiatic.....		151,685				.5
Other countries.....	3,653,871	9,536,060	4,908,103	28.1	30.3	15.3
Total.....	13,011,404	31,495,977	31,890,832	100.0	100.0	100.0
Oils, vegetable:						
Olive, edible—	<i>Gallons.</i>	<i>Gallons.</i>	<i>Gallons.</i>			
France.....	88,088	183,124	382,040	51.5	2.0	9.4
Italy.....	5,729	251,902	1,124,041	3.3	2.8	27.6
Spain.....	65,395	8,557,416	2,420,592	38.5	94.8	59.3
Other countries.....	11,449	31,694	152,138	6.7	.4	3.7
Total.....	171,161	9,024,136	4,078,811	100.0	100.0	100.0
Soya bean oil—	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>			
China.....	13,538,334	11,230,292	2,484,191	4.0	5.7	2.2
Japanese-China.....	230,839,925	99,042,642	57,426,720	68.7	50.6	51.2
Japan.....	91,605,233	84,218,232	52,301,232	27.3	43.0	46.6
Other countries.....	656	1,817,255	1,607	(1)	.7	(1)
Total.....	335,984,148	195,808,421	112,213,750	100.0	100.0	100.0
Opium.						
Turkey, Asiatic and European.....		641,187	187,978		87.8	89.0
United Kingdom.....	121,324	40,207	4,753	76.0	5.5	2.2
Other countries.....	38,297	48,878	18,546	24.0	6.7	8.8
Total.....	159,621	730,272	211,277	100.0	100.0	100.0
Seeds:						
Flaxseed or linseed—	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>			
Argentina.....	9,668,119	12,353,932	22,778,359	74.5	88.0	92.4
British India.....	11,088			.1		
Canada.....	3,240,043	1,279,132	1,637,813	25.0	9.1	6.6
United Kingdom.....	21		(1)	(1)		
Other countries.....	55,205	403,120	225,018	.4	2.9	1.0
Total.....	12,974,476	14,036,184	24,641,190	100.0	100.0	100.0
Grass seed—clover—	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>			
Canada.....	7,209,330	10,870,385	4,379,656	75.7	43.4	17.2
France.....	631,911	8,530,878	12,198,012	6.6	34.1	47.9
Germany.....		27,517	1,505,692		.1	5.9
Italy.....	1,328,715	4,639,318	5,095,882	14.0	18.5	20.0
Other countries.....	350,010	973,900	2,307,840	3.7	3.9	9.0
Total.....	9,519,966	25,041,998	25,487,082	100.0	100.0	100.0
Sugar, raw cane:						
Cuba.....	4,953,689,419	6,686,141,983	5,762,152,794	95.9	95.2	71.8
Dominican Republic.....		7,989,541	184,071,693	.1	.1	2.3
Dutch East Indies.....	3,272	30,963,112	546,193,950	(1)	.4	6.8
Philippine Islands.....	135,602,975	175,872,529	291,716,240	2.6	2.5	3.6
South America.....	29,429,746	35,040,367	522,999,268	.6	.5	6.5
Other countries.....	43,284,440	83,682,943	721,534,130	.8	1.3	9.0
Total.....	5,166,840,872	7,019,690,475	8,028,668,075	100.0	100.0	100.0
Tea:						
Canada.....	2,294,155	2,257,012	1,644,840	1.7	2.8	1.8
China.....	14,202,680	10,557,985	10,624,821	10.6	13.0	11.8
East Indies.....	60,364,828	26,387,615	31,384,537	44.9	33.3	34.8
Japan.....	56,436,050	39,959,916	29,749,891	42.0	49.4	33.0
United Kingdom.....	381,799	534,647	13,931,177	.3	.7	15.4
Other countries.....	738,089	665,745	2,911,349	.5	.8	3.2
Total.....	134,418,201	80,962,920	90,246,615	100.0	100.0	100.0

1Less than 0.05 of 1 per cent.

TABLE 392.—Origin of principal farm products imported into the United States, 1918-1920—Continued.

Article and country of origin.	Quantity.			Per cent of total.		
	Year ending Dec. 31—			Year ending Dec. 31—		
	1918	1919	1920	1918	1919	1920
VEGETABLE MATTER—continued.						
Tobacco leaf:						
Wrapper—	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
Dutch East Indies.....	6,984,516	6,504,615	2,102,664	95.5	90.9	21.2
Netherlands.....	1,315	103,723	7,720,255	(1)	1.5	77.8
Other countries.....	327,269	539,804	102,106	4.5	7.6	1.0
Total.....	7,313,100	7,154,142	9,925,025	100.0	100.0	100.0
Other leaf—						
Cuba.....	20,400,954	21,969,643	23,616,999	26.9	28.1	33.5
Dominican Republic.....	18,933,663	6,433,478	4,054,261	24.9	8.2	5.8
Germany.....			99,818		26.5	1
Greece.....	17,496,045	20,702,622	9,023,777	23.0	26.5	12.3
Turkey, Asiatic.....	23,880	11,878,239	18,836,091	(1)	15.2	26.8
Turkey, European.....		3,094,792	2,960,815		4.0	4.2
Other countries.....	19,230,473	14,131,362	11,841,997	25.2	18.0	16.8
Total.....	76,201,015	78,210,136	70,453,758	100.0	100.0	100.0
FOREST PRODUCTS.						
India rubber, crude:	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
Belgium.....		665,001	1,437,642		0.1	0.3
Brazil.....	40,932,620	58,845,384	36,981,973	12.4	11.0	6.5
Canada.....	2,712,336	5,320,540	371,334	.8	1.0	.1
Central American States and						
British Honduras.....	387,144	448,827	200,583	.1	.1	(1)
East Indies.....	265,040,618	390,884,566	424,301,608	81.3	72.9	74.9
France.....	169,318	2,410,319	3,588,662	.1	.4	.6
Mexico.....	2,185,809	963,242	900,411	.7	.2	.2
Other South America.....	3,590,744	6,965,752	6,215,157	1.1	1.3	1.1
Portugal.....	424,424	87,422	2,188,747	.1	(1)	.4
United Kingdom.....	6,627,165	60,251,894	75,297,018	2.0	11.2	13.3
Other countries.....	4,489,130	9,097,474	15,063,001	1.4	1.8	2.6
Total.....	325,959,308	535,940,421	566,546,136	100.0	100.0	100.0
Wood:						
Cabinet wood, mahogany—	<i>M feet.</i>	<i>M feet.</i>	<i>M feet.</i>			
British Africa.....	6,353	13,849	9,521	14.4	32.4	18.1
Central American States and						
British Honduras.....	22,971	18,556	26,534	52.1	43.5	50.4
Mexico.....	10,711	5,610	6,350	24.3	13.1	12.1
United Kingdom.....	77	656	5,088	.2	1.5	9.7
Other countries.....	3,986	4,007	5,114	9.0	9.5	9.7
Total.....	44,098	42,678	52,607	100.0	100.0	100.0
Boards, deals, planks, and other						
sawed lumber—						
Canada.....	1,183,015	1,119,244	1,309,260	98.1	97.8	97.8
Other countries.....	23,012	24,943	29,270	1.9	2.2	2.2
Total.....	1,206,027	1,144,187	1,338,530	100.0	100.0	100.0
Wood pulp:	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>			
Canada.....	508,081	461,392	584,534	98.4	81.2	72.2
Germany.....			7,924			1.0
Norway.....	5,134	11,168	30,590	1.0	2.0	3.8
Sweden.....	700	76,410	139,748	.1	13.5	17.3
Other countries.....	2,343	18,902	46,398	.5	3.3	5.7
Total.....	516,258	567,872	809,194	100.0	100.0	100.0

1 Less than 0.05 of 1 per cent.

TABLE 393.—Foreign trade of the United States in agricultural products 1850-1920.

[Compiled from reports of Foreign Commerce and Navigation of the United States. All values are gold.]

[In round thousands, i. e., 000 omitted.]

Year ending June 30—	Agricultural exports. ¹			Agricultural im- ports. ¹			Forest products.				
	Domestic.		For- eign.	Total.	Per cent- age of all im- ports.	Excess of agricultural exports (+) or of imports (-).	Exports.		Im- ports.	Excess of ex- ports (+) or of imports (-).	
	Total.	Per cent- age of all ex- ports.					Do- mestic.	For- eign.			
Average:	Thou- sands.	Per cent.	Thou- sands.	Thou- sands.	Per cent.	Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.	Thou- sands.	
1852-1856...	\$164,895	80.9	\$8,060	\$77,847	29.1 +	\$95,108	\$6,819	\$394	\$3,253 +	\$4,257	
1857-1861...	215,709	81.1	10,174	121,018	38.2 +	104,865	9,995	962	6,912 +	4,015	
1862-1866...	118,866	75.7	9,288	122,222	43.0 +	35,932	7,366	798	8,511 -	317	
1867-1871...	250,713	76.9	8,538	179,774	42.3 +	79,477	11,775	691	14,813 -	2,347	
1872-1876...	396,666	78.5	8,853	263,156	46.5 +	142,384	17,907	960	19,728 -	862	
1877-1881...	591,351	80.4	8,632	266,384	50.4 +	333,599	17,579	553	22,006 -	3,574	
1882-1886...	557,473	76.3	9,340	311,708	46.8 +	255,106	24,705	1,417	34,253 -	8,131	
1887-1891...	573,287	74.7	6,982	366,950	43.3 +	213,319	26,061	1,143	39,617 -	12,144	
1892-1896...	635,748	73.0	8,446	398,332	51.6 +	248,863	29,276	1,707	45,091 -	14,107	
1897-1901...	827,566	65.9	10,962	376,550	50.2 +	461,978	45,961	3,283	52,327 -	3,083	
1902-1906...	879,541	59.5	11,922	437,881	46.3 +	403,583	63,585	3,850	79,885 -	12,451	
1907-1911...	975,399	53.9	12,126	634,571	45.2 +	352,954	88,761	6,488	137,051 -	41,799	
1912-1916...	1,256,452	45.1	24,275	924,699	50.1 +	356,028	92,129	5,563	185,390 -	87,698	
1901.....	951,628	65.2	11,293	391,931	47.6 +	570,990	55,339	3,599	57,144 +	1,825	
1902.....	857,114	63.2	10,308	413,745	45.8 +	453,677	48,929	3,609	59,187 -	6,649	
1903.....	878,481	63.1	13,505	456,199	44.5 +	435,787	58,734	2,865	71,478 -	9,879	
1904.....	859,160	59.5	12,625	461,435	46.6 +	410,350	70,086	4,177	79,619 -	5,356	
1905.....	826,905	55.4	12,317	553,851	49.6 +	285,370	63,199	3,790	92,681 -	25,691	
1906.....	976,047	56.7	10,856	554,175	45.2 +	432,728	76,075	4,809	96,462 -	14,678	
1907.....	1,054,405	56.9	11,614	626,837	43.7 +	439,182	92,919	5,500	122,421 -	23,972	
1908.....	1,017,396	55.5	10,299	539,690	45.2 +	488,005	90,362	4,570	97,733 -	2,801	
1909.....	903,238	55.1	9,585	638,613	48.7 +	274,210	72,442	4,983	123,920 -	46,495	
1910.....	871,158	50.9	14,470	687,509	44.2 +	198,119	85,080	9,802	178,872 -	84,040	
1911.....	1,030,794	51.2	14,665	680,205	44.5 +	365,254	103,039	7,587	162,312 -	51,686	
1912.....	1,050,627	48.4	12,108	783,457	47.4 +	279,277	108,122	6,413	172,523 -	57,988	
1913.....	1,123,652	46.3	15,029	815,301	45.0 +	323,391	124,836	7,432	180,502 -	48,235	
1914.....	1,113,974	47.8	17,729	924,247	48.8 +	207,456	106,979	4,518	155,261 -	43,765	
1915.....	1,475,938	54.3	34,420	910,786	54.4 +	599,571	52,554	5,089	165,849 -	108,207	
1916.....	1,518,071	35.5	42,088	1,189,705	54.1 +	370,454	68,155	4,364	252,851 -	180,331	
1917.....	1,968,253	31.6	37,610	1,404,972	52.8 +	600,921	68,919	11,172	322,699 -	242,609	
1918.....	2,280,466	39.1	39,553	1,618,874	55.0 +	701,144	87,181	6,066	335,033 -	241,787	
Calendar year:											
1918.....	2,756,665	45.6	73,959	1,671,106	55.1 +	1,159,428	88,022	5,891	279,605 -	185,692	
1919.....	4,107,159	53.0	122,561	2,392,880	61.3 +	1,836,839	150,324	6,899	374,455 -	217,232	
1920 (pre- liminary)	3,466,620	42.9	105,817	3,011,368	57.0 +	561,069	191,848	10,350	521,332 -	319,134	

¹ Not including forest products.

MISCELLANEOUS AGRICULTURAL STATISTICS.

CROP SUMMARY.

The December estimates of the Crop Reporting Board of the Bureau of Markets and Crop Estimates of the acreage, production, and value (based on prices paid to farmers on Dec. 1) of important farm crops of the United States in 1921, 1920, and 1919, based on the reports of the correspondents and agents of the Bureau, are as follows (1919 figures revised):

TABLE 394.—Crop summary, 1921, 1920, and 1919.

Crop.	Acreage.	Production.			Farm value Dec. 1.	
		Per acre.	Total.	Unit.	Per unit.	Total.
Corn:					<i>Cents.</i>	<i>Dollars.</i>
1921.....	103,850,000	29.7	3,080,372,000	Bush....	42.3	1,302,670,000
1920.....	101,699,000	31.5	3,208,584,000	do.....	67.0	2,150,332,000
1919.....	97,170,000	28.9	2,811,302,000	do.....	134.5	3,780,597,000
Winter wheat:						
1921.....	42,702,000	13.7	587,032,000	do.....	95.2	558,725,000
1920.....	40,016,000	15.3	610,597,000	do.....	148.6	907,291,000
1919.....	50,494,000	15.1	760,377,000	do.....	210.5	1,600,895,000
Spring wheat:						
1921.....	19,706,000	10.5	207,861,000	do.....	85.8	178,343,000
1920.....	21,127,000	10.5	222,430,000	do.....	130.4	289,972,000
1919.....	25,200,000	8.2	207,602,000	do.....	230.9	479,251,000
All wheat:						
1921.....	62,408,000	12.7	794,893,000	do.....	92.7	737,068,000
1920.....	61,143,000	13.6	833,027,000	do.....	143.7	1,197,203,000
1919.....	75,694,000	12.8	967,979,000	do.....	214.9	2,080,056,000
Oats:						
1921.....	44,326,000	23.7	1,060,737,000	do.....	30.3	321,540,000
1920.....	42,491,000	35.2	1,496,221,000	do.....	45.0	688,311,000
1919.....	40,359,000	29.3	1,184,030,000	do.....	70.4	833,922,000
Barley:						
1921.....	7,240,000	20.9	151,181,000	do.....	42.2	63,788,000
1920.....	7,600,000	24.9	189,332,000	do.....	71.3	135,083,000
1919.....	6,720,000	22.0	147,608,000	do.....	120.6	178,080,000
Rye:						
1921.....	4,228,000	13.7	57,918,000	do.....	70.2	40,680,000
1920.....	4,409,000	13.7	60,490,000	do.....	126.8	76,693,000
1919.....	6,307,000	12.0	75,483,000	do.....	133.2	100,573,000
Buckwheat:						
1921.....	671,000	21.0	14,079,000	do.....	81.2	11,438,000
1920.....	701,000	18.7	13,142,000	do.....	128.3	16,863,000
1919.....	700,000	20.6	14,399,000	do.....	146.1	21,032,000
Flaxseed:						
1921.....	1,165,000	7.0	8,112,000	do.....	144.6	11,732,000
1920.....	1,737,000	6.1	10,774,000	do.....	176.7	19,039,000
1919.....	1,503,000	4.8	7,256,000	do.....	438.3	31,802,000
Rice:						
1921.....	911,000	40.1	36,515,000	do.....	95.3	34,802,000
1920.....	1,336,000	39.0	52,068,000	do.....	119.1	62,036,000
1919.....	1,363,000	39.5	41,985,000	do.....	266.6	111,913,000
Potatoes:						
1921.....	3,815,000	90.9	346,823,000	do.....	111.1	385,192,000
1920.....	3,657,000	110.3	403,298,000	do.....	114.5	461,778,000
1919.....	3,542,000	91.2	322,867,000	do.....	159.5	514,555,000
Sweet potatoes:						
1921.....	1,066,000	92.6	98,660,000	do.....	88.1	86,910,000
1920.....	992,000	104.8	103,925,000	do.....	113.4	117,834,000
1919.....	941,000	103.2	97,120,000	do.....	134.4	130,514,000
Hay, tame:						
1921.....	58,742,000	1.39	81,567,000	Ton.....	\$12.13	989,693,000
1920.....	58,101,000	1.51	87,853,000	do.....	\$17.76	1,560,235,000
1919.....	56,888,000	1.52	86,359,000	do.....	\$20.08	1,734,085,000
Hay, wild:						
1921.....	15,483,000	.98	15,235,000	do.....	\$9.63	101,083,000
1920.....	15,787,000	1.11	17,460,000	do.....	\$11.35	198,115,000
1919.....	17,150,000	1.07	18,401,000	do.....	\$16.50	303,639,000
All hay:						
1921.....	74,225,000	1.30	96,802,000	do.....	\$11.27	1,090,776,000
1920.....	73,888,000	1.43	105,315,000	do.....	\$16.70	1,758,350,000
1919.....	74,038,000	1.41	104,760,000	do.....	\$19.45	2,037,724,000
Tobacco:						
1921.....	1,435,000	749.4	1,075,418,000	Lb.....	19.9	213,846,000
1920.....	1,960,000	807.3	1,582,225,000	do.....	21.2	335,675,000
1919.....	1,951,000	751.1	1,465,481,000	do.....	39.0	570,868,000
Cotton:						
1921.....	30,509,000	124.5	7,953,641	Bale....	116.2	643,933,000
1920.....	35,878,000	178.4	13,439,603	do.....	113.9	933,658,000
1919.....	33,566,000	161.5	11,420,733	do.....	135.6	2,034,658,000
Cotton seed:						
1921.....			3,704,000	Ton.....	\$29.15	107,972,000
1920.....			5,970,000	do.....	\$26.00	155,220,000
1919.....			5,074,000	do.....	\$72.65	368,626,000

¹ Pounds per acre and cents per pound.

CROP SUMMARY—Continued.

TABLE 394.—Crop summary, 1921, 1920. and 1919—Continued.

Crop.	Acreage.	Production.			Farm value Dec. 1.	
		Per acre.	Total.	Unit.	Per unit.	Total.
Clover seed:					<i>Cents.</i>	<i>Dollars.</i>
1921.....	869,000	1.6	1,411,000	Bush....	\$10.27	14,488,000
1920.....	1,082,000	1.8	1,944,000	..do....	\$11.95	23,227,000
1919.....	942,000	1.6	1,484,000	..do....	\$26.75	39,700,000
Sugar beets:						
1921 ²	815,000	9.55	7,782,000	Ton.....	\$6.32	49,154,000
1920.....	872,000	9.79	8,538,000	..do....	\$11.63	99,324,000
Beet sugar:						
1921.....	814,988	2,504	2,040,978,000	Lb.....	.....	.....
1920.....	871,676	2,499	2,178,042,000	..do....	.....	.....
Cane sugar (I.a.).						
1921.....	226,366	2,866	648,862,000	..do....	.....	.....
1920.....	182,843	1,850	338,254,000	..do....	.....	.....
Maple sugar and sirup (as sugar):						
1921.....	^a 15,234,100	^a 1.58	24,097,400	..do....	^c 25.7	6,193,032
1920.....	^a 17,638,013	^a 1.92	33,768,300	..do....	^c 31.6	10,670,782
Sorghum sirup:						
1921.....	518,000	87.9	45,554,000	Gall....	62.9	28,670,000
1920.....	536,000	92.4	49,505,000	..do....	106.9	52,943,000
1919.....	487,000	80.9	39,413,000	..do....	110.8	43,688,000
Peanuts:						
1921.....	1,212,000	673.7	816,465,000	Lb.....	4.0	32,288,000
1920.....	1,181,000	712.5	841,474,000	..do....	5.3	44,256,000
1919.....	1,132,000	691.9	783,273,000	..do....	9.3	73,094,000
Beans (7 States):						
1921.....	771,000	11.8	9,118,000	Bush....	\$2.66	24,298,000
1920.....	838,000	10.8	9,077,000	..do....	\$2.95	26,806,000
1919.....	1,060,000	12.6	13,349,000	..do....	\$4.26	56,811,000
Kaffirs (10 States):						
1921.....	4,652,000	24.7	115,110,000	..do....	39.3	45,260,000
1920.....	5,120,000	26.8	137,408,000	..do....	92.9	127,629,000
1919.....	5,060,000	25.8	130,734,000	..do....	127.4	166,510,000
Broom corn (7 States):						
1921.....	207,400	^b 338.4	35,100	Ton.....	\$72.76	2,554,000
1920.....	275,500	^b 265.0	36,500	..do....	\$126.16	4,605,000
1919.....	352,000	^b 303.4	53,400	..do....	\$154.57	8,254,000
Onions (22 States):						
1921.....	55,829	226.6	12,652,000	Bush....	213.1	26,966,000
1920.....	64,650	362.5	23,435,000	..do....	129.6	30,377,000
Cabbage (25 States):						
1921.....	94,035	6.4	606,274	Ton.....	\$48.02	29,116,000
1920.....	113,838	8.9	1,029,662	..do....	\$33.99	35,001,000
Hops (4 States):						
1921.....	28,000	1,040.7	29,140,000	Lb.....	24.4	7,117,000
1920.....	28,000	1,224.3	34,280,000	..do....	35.7	12,236,000
1919.....	21,000	1,189.0	24,970,000	..do....	77.6	19,376,000
Cranberries (3 States):						
1921.....	25,000	14.9	373,000	Bbl.....	\$16.60	6,192,000
1920.....	25,000	18.0	449,000	..do....	\$12.28	5,514,000
1919.....	25,000	22.0	549,000	..do....	\$8.37	4,597,000
Apples, total:						
1921.....			98,097,000	Bush....	167.8	164,631,000
1920.....			223,677,000	..do....	114.8	256,699,000
1919.....			142,086,000	..do....	183.6	260,939,000
Apples, commercial:						
1921.....			21,204,000	Bbl.....	\$4.59	97,322,000
1920.....			33,905,000	..do....	\$3.74	126,800,000
1919.....			26,159,000	..do....	\$5.34	139,669,000
Peaches:						
1921.....			32,733,000	Bush....	159.4	52,176,000
1920.....			45,620,000	..do....	210.4	95,970,000
1919.....			53,178,000	..do....	189.0	100,485,000
Pears:						
1921.....			10,705,000	..do....	171.3	18,342,000
1920.....			16,805,000	..do....	165.8	27,865,000
1919.....			15,101,000	..do....	184.4	27,852,000
Oranges (2 States):						
1921.....			30,700,000	Box.....	\$2.08	63,850,000
1920.....			29,700,000	..do....	\$2.19	64,908,000
1919.....			22,528,000	..do....	\$2.67	60,202,000
Soy beans:						
1921.....	186,000	15.1	2,815,000	Bush....	216.0	6,080,000
1920.....	156,000	14.6	2,278,000	..do....	304.0	6,926,000
1919.....	155,000	13.2	2,045,000	..do....	333.2	6,814,000

² Including beets grown in Canada for United States factories.³ Trees tapped.⁴ Per tree.⁵ Mar. 15.⁶ Pounds.

CROP SUMMARY—Continued.

TABLE 394.—*Crop summary, 1921, 1920, and 1919—Continued.*

Crop.	Acreage.	Production.			Farm value Dec 1.	
		Per acre.	Total.	Unit.	Per unit.	Total.
Cow peas:					<i>Cents</i>	<i>Dollars.</i>
1921.....	1, 133, 000	8.5	9, 581, 000	Bush...	177.0	16, 960, 000
1920.....	990, 000	9.0	8, 904, 000	...do.....	233.4	20, 780, 000
1919.....	939, 000	6.3	6, 026, 000	...do.....	274.4	16, 537, 000
Total:						
1921.....	347, 141, 630					5, 646, 682, 000
1920.....	348, 977, 831					9, 052, 878, 000
1919.....	354, 759, 908					13, 820, 515, 000

VALUE OF FARM PRODUCTS.

TABLE 395.—*Estimated value of farm products, 1879-1921, based on prices at the farm.*

Year.	Total gross (to be read as index numbers).	Crops.		Animals and animal products.	
		Value.	Percent- age of total.	Value.	Percent- age of total.
1879 (census).....	\$2, 212, 540, 987				
1889 (census).....	2, 450, 107, 454				
1897.....	3, 931, 000, 000	\$2, 519, 000, 000	63.6	\$1, 442, 000, 000	36.4
1898.....	4, 339, 000, 000	2, 760, 000, 000	63.6	1, 579, 000, 000	36.4
1899 (census).....	4, 717, 069, 978	2, 998, 704, 412	63.6	1, 718, 000, 000	36.4
1900.....	5, 010, 000, 000	3, 192, 000, 000	63.7	1, 818, 000, 000	36.3
1901.....	5, 302, 000, 000	3, 385, 000, 000	63.8	1, 917, 000, 000	36.2
1902.....	5, 595, 000, 000	3, 578, 000, 000	64.0	2, 016, 000, 000	36.0
1903.....	5, 887, 000, 000	3, 772, 000, 000	64.1	2, 116, 000, 000	35.9
1904.....	6, 122, 000, 000	3, 982, 000, 000	65.0	2, 140, 000, 000	35.0
1905.....	6, 274, 000, 000	4, 013, 000, 000	64.0	2, 261, 000, 000	36.0
1906.....	6, 764, 000, 000	4, 263, 000, 000	63.0	2, 501, 000, 000	37.0
1907.....	7, 488, 000, 000	4, 761, 000, 000	63.6	2, 727, 000, 000	36.4
1908.....	7, 891, 000, 000	5, 098, 000, 000	64.6	2, 792, 000, 000	35.4
1909 (census).....	8, 558, 161, 228	5, 487, 161, 223	64.1	3, 071, 000, 000	35.9
1910.....	9, 037, 000, 000	5, 488, 000, 000	60.7	3, 551, 000, 000	39.3
1911.....	8, 819, 000, 000	5, 562, 000, 000	63.1	3, 257, 000, 000	36.9
1912.....	9, 343, 000, 000	5, 842, 000, 000	62.5	3, 501, 000, 000	37.5
1913.....	9, 850, 000, 000	6, 133, 000, 000	62.3	3, 717, 000, 000	37.7
1914.....	9, 895, 000, 000	6, 112, 000, 000	61.8	3, 783, 000, 000	38.2
1915.....	10, 775, 000, 000	6, 907, 000, 000	64.1	3, 868, 000, 000	35.9
1916.....	13, 406, 000, 000	9, 054, 000, 000	67.5	4, 352, 000, 000	32.5
1917.....	19, 331, 000, 000	13, 479, 000, 000	69.7	5, 852, 000, 000	30.3
1918.....	22, 480, 000, 000	14, 331, 000, 000	63.8	8, 149, 000, 000	36.2
1919.....	23, 783, 000, 000	15, 423, 000, 000	64.8	8, 361, 000, 000	35.2
1920.....	18, 263, 000, 000	10, 909, 000, 000	59.7	7, 354, 000, 000	40.3
1921.....	12, 366, 000, 000	7, 028, 000, 000	56.8	5, 338, 000, 000	43.2

CROP VALUE PER ACRE.

TABLE 396.—*Yearly value per acre of 10 crops combined.*

Corn, wheat, oats, barley, rye, buckwheat, potatoes, hay, tobacco, and cotton, which comprise nearly 90 per cent of the area in all field crops, the average value of which closely approximates the value per acre of the aggregate of all crops.]

1866.....	\$14. 17	1880.....	\$13. 01	1894.....	\$9. 06	1908.....	\$15. 32
1867.....	15. 09	1881.....	13. 10	1895.....	8. 12	1909.....	16. 00
1868.....	14. 17	1882.....	12. 93	1896.....	7. 94	1910.....	15. 53
1869.....	14. 67	1883.....	10. 93	1897.....	9. 07	1911.....	15. 36
1870.....	15. 40	1884.....	9. 95	1898.....	9. 00	1912.....	16. 09
1871.....	15. 74	1885.....	9. 72	1899.....	9. 13	1913.....	16. 49
1872.....	14. 86	1886.....	9. 41	1900.....	10. 31	1914.....	16. 44
1873.....	14. 19	1887.....	10. 14	1901.....	11. 43	1915.....	17. 18
1874.....	13. 25	1888.....	10. 30	1902.....	12. 07	1916.....	22. 58
1875.....	12. 20	1889.....	8. 99	1903.....	12. 62	1917.....	33. 27
1876.....	10. 80	1890.....	11. 03	1904.....	13. 26	1918.....	33. 73
1877.....	12. 00	1891.....	11. 76	1905.....	13. 28	1919.....	35. 74
1878.....	10. 37	1892.....	10. 10	1906.....	13. 46	1920.....	23. 26
1879.....	13. 26	1893.....	9. 50	1907.....	14. 74	1921.....	14. 44

AGGREGATE CROP-VALUE COMPARISONS.

TABLE 397.—*Value of 22 crops and hypothetical value of all crops, with rank, 1919-1921.*

The following tabulation gives the estimated total value of 22 crops—corn, wheat, oats, barley, rye, buckwheat, flaxseed, rice, potatoes, sweet potatoes, all hay, tobacco, lint cotton, beans, broom corn, grain sorghums, hops, oranges, clover seed, peanuts, cranberries, and apples—in the United States, by States, in 1921, 1920, and 1919 (census); the value of all crops in 1919 (census), and the hypothetical value of all crops in several years, based upon the value of the 22 crops in all census years at current prices. The slight differences in the total value of crops in the United States between Table 395 and Table 397 are due to different methods of estimating. In Table 397, where each State is shown separately, a more detailed method is used than is practicable in Table 395.

[Values in thousands of dollars, i. e., 000 omitted.]

State.	Value of 22 crops.			Value all crops 1919 (census) ¹ .	Ratio value 22 crops to all crops in census 1919.	Hypothetical value of all crops.			Rank.	
	1921	1920	1919 (census).			1921	1920	1915-1919 average.	1921	
									22 crops.	All crops.
Me.	60,691	65,299	91,982	100,152	92	65,968	70,977	64,739	21	33
N. H.	17,848	19,482	18,479	23,510	79	22,592	24,661	21,232	44	43
Vt.	31,496	42,344	36,835	48,000	77	40,904	54,992	43,921	39	40
Mass.	33,105	40,041	36,601	53,701	68	48,684	58,884	50,840	38	27
R. I.	2,802	4,023	3,680	5,340	69	4,061	5,830	5,613	48	48
Conn.	38,691	33,952	36,006	44,492	81	47,767	48,059	43,705	35	39
N. Y.	207,682	326,917	321,598	417,047	77	269,717	424,568	364,353	5	4
N. J.	37,500	54,927	61,253	87,464	70	53,571	78,467	78,704	37	35
Pa.	195,334	312,116	350,991	409,939	86	227,133	362,926	347,048	7	8
Del.	7,664	13,912	16,516	23,059	72	10,631	19,322	22,593	47	46
Md.	38,420	72,029	88,066	110,119	80	48,025	90,036	94,641	36	38
Va.	111,429	194,693	247,463	292,824	85	131,093	229,051	243,935	26	26
W. Va.	46,999	77,146	78,143	96,537	81	58,023	95,242	99,078	34	34
N. C.	228,706	307,257	438,892	503,229	87	262,880	353,109	369,101	4	5
S. C.	119,872	205,063	360,025	437,122	82	146,185	250,077	316,283	25	24
Ga.	142,389	231,884	430,270	540,614	80	177,986	289,855	467,684	17	14
Fla.	31,109	45,245	49,521	80,257	62	50,176	72,978	78,900	40	36
Ohio	184,845	332,109	526,913	607,039	87	212,466	331,734	447,023	9	10
Ind.	147,620	275,037	449,079	497,230	90	161,022	305,597	406,164	16	17
Ill.	271,321	447,398	797,893	864,738	92	294,914	486,302	706,520	2	3
Mich.	150,883	256,163	329,651	404,015	82	184,004	312,394	304,959	14	13
Wis.	178,698	315,876	330,404	445,343	81	220,615	389,970	353,573	10	9
Minn.	174,949	277,347	450,327	505,020	89	196,572	311,626	429,358	11	11
Iowa	337,952	436,153	820,126	890,391	92	253,643	474,079	668,423	3	6
Mo.	178,082	318,137	490,261	559,048	89	194,474	357,457	410,627	12	12
N. Dak.	127,793	207,989	278,315	301,783	92	138,905	226,075	282,871	21	25
S. Dak.	104,827	183,424	288,376	311,007	93	112,717	197,230	312,505	27	27
Nebr.	162,485	286,627	491,338	519,730	95	171,037	301,713	423,654	13	16
Kans.	207,578	357,216	536,408	558,923	91	228,108	392,545	445,575	6	7
Ky.	133,759	219,848	310,224	348,655	89	150,291	247,020	304,655	18	22
Tenn.	132,406	191,124	263,797	318,285	83	159,525	230,270	251,288	20	19
Ala.	126,990	147,068	240,271	304,349	81	150,778	181,565	259,615	23	20
Miss.	124,080	143,542	278,539	336,207	83	149,494	172,942	263,995	24	23
La.	73,328	98,682	147,290	206,183	71	103,279	138,989	199,810	28	28
Tex.	352,311	590,275	885,955	1,071,527	83	424,471	711,175	808,130	1	1
Okla.	148,823	268,125	479,314	549,249	87	171,061	308,190	347,844	15	15
Ark.	132,604	183,397	283,175	341,565	83	159,764	220,960	272,163	19	18
Mont.	58,333	83,140	60,058	69,975	86	67,829	96,674	108,527	33	32
Wyo.	18,319	31,749	26,528	30,271	88	20,817	36,078	42,732	43	44
Colo.	63,439	115,686	137,660	181,065	76	83,472	152,218	140,586	30	30
N. Mex.	21,635	29,544	31,093	40,620	77	28,097	38,369	36,561	41	41
Ariz.	16,580	33,191	35,478	42,481	84	19,738	39,513	30,763	45	45
Utah.	18,473	32,540	40,901	58,067	70	26,390	46,486	50,000	42	42
Nev.	7,731	10,313	13,439	13,980	96	8,053	10,743	15,814	46	47
Idaho.	60,179	89,068	111,938	126,492	88	68,385	101,214	97,564	32	31
Wash.	127,662	145,749	185,667	227,212	82	155,685	177,743	170,487	22	21
Oreg.	63,916	87,981	99,085	131,885	75	85,221	117,308	113,982	29	29
Calif.	189,280	272,047	315,092	587,601	54	350,519	503,791	474,474	8	2
U. S.	5,343,608	8,517,875	12,442,956	14,754,376	84.3	6,430,742	10,197,092	11,887,577	.....	.....

¹ Does not include nursery or greenhouse products or forest products of the farm.

WHEN CROPS ARE HARVESTED.

The tabulation below shows when crops are harvested in the United States by showing what proportion of the crop is usually harvested each month. Two factors tend to modify these percentages in any given year. In some years harvests come somewhat earlier or later than normal. Also, if the crop is larger than usual in its northern section and smaller than usual in its southern section, or vice versa, the effect is to modify the percentage of the total crop which is harvested in a particular month. However, it is not likely that such changes from normal are often so marked throughout the United States as to alter greatly the averages here given.

TABLE 398.—Percentage of crops of United States harvested monthly.

Crop.	January-April.	May.	June.	July.	August.	September.	October.	November.	December.
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
Barley.....		1.2	8.2	51.6	33.9	4.9	0.2		
Buckwheat.....				.8	6.7	64.9	26.7	0.9	
Corn.....			.1	.1	1.5	15.8	28.3	43.3	10.9
Oats.....		1.0	7.9	52.9	34.2	3.8	.2		
Rice.....				.9	15.3	33.0	33.8	14.6	2.4
Rye.....		.2	11.3	71.5	16.3	.7			
Wheat.....		.5	22.0	42.3	28.4	6.5	.3		
Apples.....		.1	2.5	7.2	12.5	27.7	45.5	4.5	
Blackberries.....	0.1	1.8	15.4	47.6	27.1	6.2	1.7	.1	
Cantaloupes.....	.3	1.8	8.7	20.9	36.7	28.6	3.0		
Cranberries.....					7.3	67.1	25.6		
Grapes.....			.1	3.5	15.2	48.0	29.8	3.4	
Peaches.....		1.6	7.9	23.4	34.3	26.9	5.9		
Pears.....		.1	.4	7.5	25.1	44.4	21.5	1.0	
Raspberries.....		.5	16.5	58.4	21.7	2.8	.1		
Strawberries.....	4.8	23.6	49.4	18.3	3.1	.6	.1	.1	
Watermelons.....		.4	5.2	27.3	39.8	24.1	3.2		
Beans (dry).....				.8	13.8	54.9	26.9	3.6	
Beans (lima).....	.1	.7	3.4	8.4	22.1	43.4	20.4	1.5	
Cabbage.....	4.2	2.3	4.7	6.8	0.1	18.1	40.4	14.0	.4
Onions.....	1.7	4.4	8.7	12.6	17.2	32.5	21.9	1.0	
Potatoes.....	.2	1.3	3.3	6.8	12.1	33.7	39.2	3.3	.1
Sweet potatoes.....	.1		.1	1.7	6.2	21.5	49.1	20.6	.7
Tomatoes.....	3.1	1.3	3.8	11.4	29.2	39.7	9.7	1.5	.3
Hay, all.....	.2	2.2	15.3	47.8	21.8	10.7	1.9	.1	
Alfalfa.....	.9	5.3	24.1	28.0	21.5	16.4	3.7	.1	
Alfalfa seed.....			.6	10.7	30.5	45.1	13.0	.1	
Bluegrass seed.....		5.1	43.0	23.6	16.4	11.4	.5		
Clover seed.....			.2	3.4	21.2	54.4	20.0	.8	
Millet.....		.2	1.7	16.4	40.5	37.2	4.0		
Timothy hay.....			7.1	73.6	17.8	1.5			
Timothy seed.....			.8	36.1	54.0	9.1			
Wild hay.....	.2	.6	4.1	28.9	36.5	26.4	3.3		
Broom corn.....			2.8	9.7	29.0	43.1	14.4	1.0	
Cotton.....	.4			1.4	11.5	31.6	34.4	16.0	4.7
Flaxseed.....			.1	3.0	31.5	56.5	8.9		
Hops.....				1.1	27.6	63.6	7.7		
Peanuts.....			.1	2.1	12.5	39.3	37.7	8.0	.3
Sorghum (sirup).....			.1	1.4	13.3	51.9	30.9	2.4	
Sugar beets.....				1.0	3.8	18.5	56.3	20.2	.2
Tobacco.....			.6	7.5	27.1	52.7	12.1		

PLANTING DATES.

TABLE 399.—Mean dates when planting of specified crops begins, becomes general, and ends.

State.	Corn.			Oats.			Spring wheat.		
	Begin- ning.	General.	Ending.	Begin- ning.	General.	Ending.	Begin- ning.	General.	Ending.
Me.	May 17	May 26	June 6	May 2	May 13	June 1			
N. H.	May 14	May 24	June 4	May 1	May 12	May 27			
Vt.	May 17	May 25	do.	Apr. 29	May 9	May 22			
Mass.	May 10	May 20	May 31	Apr. 10	May 27	May 6	Apr. 28	May 8	May 18
R. I.	do.	May 19	June 11	Apr. 13	Apr. 25	May 8			
Conn.	do.	May 22	June 4	Apr. 9	Apr. 22	do.			
N. Y.	May 12	May 21	June 3	Apr. 19	Apr. 30	May 18	Apr. 14	Apr. 28	May 12
N. J.	May 6	May 14	May 31	Apr. 1	Apr. 12	Apr. 24			
Pa.	May 4	May 15	May 29	Apr. 6	Apr. 19	May 2	Apr. 3	Apr. 17	May 2
Del.	Apr. 28	May 6	May 20						
Md.	Apr. 26	May 8	May 31	Mar. 20	Apr. 1	Apr. 21			
Va.	Apr. 20	May 2	May 21	Mar. 15	Apr. 28	Apr. 13			
W. Va.	Apr. 26	May 10	May 27	Mar. 26	Apr. 8	Apr. 22			
N. C.	Mar. 30	Apr. 19	May 24	Feb. 21	Mar. 7	Mar. 23	Jan. 29	Feb. 21	Mar. 12
S. C.	Mar. 18	Apr. 5	May 15						
Ga.	Mar. 16	Apr. 4	May 7	Feb. 6	Feb. 27	Mar. 16			
Fla.	Feb. 21	Mar. 11	Apr. 2						
Ohio.	May 1	May 11	May 27	Mar. 27	Apr. 9	Apr. 22			
Ind.	do.	do.	May 31	Mar. 20	Apr. 4	Apr. 18			
Ill.	Apr. 30	May 13	June 2	Mar. 19	Mar. 31	Apr. 14	Mar. 22	Apr. 1	Apr. 9
Mich.	May 15	May 22	do.	Apr. 20	Apr. 30	May 10	Apr. 23	May 3	May 14
Wis.	May 11	May 18	May 28	Apr. 16	Apr. 24	May 7	Apr. 10	Apr. 20	Apr. 27
Minn.	May 13	May 19	May 30	Apr. 19	Apr. 29	May 9	Apr. 13	Apr. 23	May 5
Iowa.	May 4	May 13	May 26	Apr. 3	Apr. 11	Apr. 22	Mar. 29	Apr. 6	Apr. 14
Mo.	Apr. 14	May 1	May 22	Mar. 10	Mar. 25	Apr. 10			
N. Dak.	May 14	May 21	May 31	Apr. 24	May 5	May 19	Apr. 8	Apr. 21	May 9
S. Dak.	May 9	May 19	June 1	Apr. 8	Apr. 18	Apr. 30	Apr. 1	Apr. 14	Apr. 28
Nebr.	May 3	May 13	May 29	Apr. 2	Apr. 12	Apr. 23	Mar. 22	Apr. 2	Apr. 13
Kans.	Apr. 14	Apr. 29	May 18	Mar. 7	Mar. 21	Apr. 3	Feb. 27	Mar. 13	Mar. 27
Ky.	Apr. 15	May 5	May 26	Mar. 8	Mar. 23	Apr. 11			
Tenn.	Mar. 31	Apr. 21	May 25	Feb. 22	Mar. 11	Apr. 1			
Ala.	Mar. 12	Apr. 5	May 18	Jan. 31	Feb. 20	Mar. 9			
Miss.	do.	Apr. 1	May 10	Feb. 1	Feb. 19	do.			
La.	Feb. 27	Mar. 22	Apr. 24						
Tex.	do.	Mar. 13	Apr. 4	Jan. 27	Feb. 10	Feb. 25	Jan. 25	Feb. 13	Feb. 23
Okla.	Mar. 24	Apr. 7	Apr. 30	Feb. 17	Mar. 4	Mar. 21			
Ark.	Mar. 18	Apr. 6	May 6	Feb. 15	Mar. 1	Mar. 18			

State.	Barley.			Tobacco.			Cotton.		
	Begin- ning.	General.	Ending.	Begin- ning.	General.	Ending.	Begin- ning.	General.	Ending.
Me.	May 12	May 26	June 11						
N. H.	May 16	May 21	June 4						
Vt.	May 12	May 22	June 8						
Mass.	May 11	do.	June 4	May 28	June 12	June 26			
Conn.				May 26	June 10	June 24			
N. Y.	Apr. 22	Apr. 30	May 16	June 1	June 15	June 30			
Pa.	Apr. 8	Apr. 20	May 2	May 30	June 12	June 27			
Md.				May 23	June 8	June 23			
Va.				May 16	June 5	June 20			
W. Va.				May 23	do.	June 22			
N. C.				Apr. 29	May 14	May 31	Apr. 19	May 1	May 16
S. C.				Apr. 10	Apr. 23	May 3	Apr. 5	Apr. 22	May 12
Ga.				Apr. 19	May 4	May 23	do.	Apr. 21	do.
Fla.				Mar. 25	Apr. 20	May 15	Mar. 16	Mar. 28	Apr. 20
Ohio.	Mar. 28	Apr. 8	Apr. 21	May 28	June 11	June 25			
Ind.	Mar. 27	Apr. 7	Apr. 19	May 25	June 9	June 26			
Ill.				May 23	May 28	June 14			
Mich.	Apr. 25	May 4	May 15	June 1	June 16	June 30			
Wis.	Apr. 23	Apr. 30	May 9						

PLANTING DATES—Continued.

TABLE 309.—*Mean dates when planting of specified crops begins, becomes general, and ends—Continued.*

State.	Barley.			Tobacco.			Cotton.		
	Begin- ning.	General.	Ending.	Begin- ning.	General.	Ending.	Begin- ning.	General.	Ending.
Minn.....	May 1	May 10	May 20	.....	.....	.....	.....	.....	.....
Iowa.....	Apr. 8	Apr. 11	Apr. 22	.....	.....	.....	.....	.....	.....
Mo.....	Mar. 15	Apr. 3	Apr. 15	May 27	June 7	June 20	Apr. 25	May 4	May 14
N. Dak.....	May 4	May 14	May 23	.....	.....	.....	.....	.....	.....
S. Dak.....	Apr. 14	Apr. 26	May 10	.....	.....	.....	.....	.....	.....
Nebr.....	Apr. 8	Apr. 17	Apr. 23	.....	.....	.....	.....	.....	.....
Kans.....	Mar. 18	Mar. 30	Apr. 13	.....	.....	.....	.....	.....	.....
Ky.....	.....	.....	.....	May 18	June 1	June 17	.....	.....	.....
Tenn.....	.....	.....	.....	May 10	May 22	June 5	Apr. 21	May 2	May 16
Ala.....	.....	.....	.....	.....	.....	.....	Apr. 8	Apr. 20	May 11
Miss.....	.....	.....	.....	.....	.....	.....	Apr. 5	Apr. 21	do.....
La.....	.....	.....	.....	.....	.....	.....	Mar. 29	do.....	May 7
Tex.....	.....	.....	.....	.....	.....	.....	do.....	Apr. 13	May 9
Okla.....	Feb. 23	Mar. 17	Mar. 31	.....	.....	.....	Apr. 18	May 2	May 24
Ark.....	.....	.....	.....	May 12	May 24	June 4	Apr. 15	Apr. 28	May 13

SEED USED PER ACRE.

In consideration of supplies and distribution of crops, as well as for other purposes, the average quantity per acre used for seed is frequently a question of interest. A year ago county crop correspondents of the Bureau of Statistics were requested to report the quantity of various seeds usually sown or planted per acre; the returns were tabulated and show the following averages for the United States, more or less variation from the average prevails in different States, and, therefore, in addition to the averages of returns, an estimate of the range of the bulk of the seedings (not the extreme range) is also given:

TABLE 400.—*Seed used per acre, approximate averages for the United States.*

Crop.	Average of reports.	Estimated range of bulk of plantings.
Alfalfa, broadcast.....	pounds.. 18.3	15 to 20
Alfalfa, drilled.....	do.. 14.8	12 to 18
Barley.....	bushels.. 1.84	1.5 to 2.0
Beans, field, small.....	do.. .76	.5 to 1.0
Beans, field, large.....	do.. 1.29	1.0 to 1.5
Beets, common (not sugar).....	pounds.. 6.3	5.5 to 7.5
Blue grass.....	bushels.. 1.07	.75 to 1.25
Broom corn.....	pounds.. 6.0	3 to 7
Buckwheat.....	bushels.. .98	.75 to 1.25
Cabbage plants.....	number.. 5,658.0	5,000 to 7,000
Clover, alsike.....	pounds.. 8.7	8 to 12
Clover, Japan.....	do.. 9.9	9 to 15
Clover, mammoth.....	do.. 10.4	8 to 12
Clover, red, alone.....	do.. 10.7	8 to 12
Clover, red, on grain.....	do.. 9.8	8 to 12
Clover, crimson.....	do.. 12.1	10 to 15
Corn, for grain.....	do.. 9.5	6 to 12
Corn, fodder, for silage.....	do.. 26.0	15 to 35
Cotton.....	bushels.. .96	.9 to 1.1
Cowpeas, for forage.....	do.. 1.31	1.0 to 1.5
Cowpeas, in drill with corn.....	do.. .63	.40 to .65
Cowpeas, for seed.....	do.. .70	.50 to .75
Field peas, small.....	do.. .93	.75 to 1.25
Field peas, large.....	do.. 1.17	1.0 to 1.5
Flaxseed.....	pounds.. 29.2	25 to 30
Oats.....	bushels.. 2.37	2.0 to 2.5
Orchard grass.....	pounds.. 12.6	10 to 15
Peanuts.....	bushels.. 1.02	1.0 to 1.1
Potatoes.....	do.. 8.6	7 to 12
Rice.....	do.. 1.98	1.5 to 2.5
Rye, for grain.....	do.. 1.44	1.25 to 1.75
Rye, for forage.....	do.. 1.82	1.5 to 2.0
Soy beans, drilled.....	do.. .79	.50 to 1.00
Soy beans, broadcast.....	do.. 1.37	1.00 to 1.50
Sugar beets.....	pounds.. 13.1	12 to 18
Sweet potato plants.....	number.. 6,605.0	6,000 to 7,000
Timothy.....	pounds.. 9.4	8 to 12
Tobacco plants.....	number.. 4,762.0	.....
Wheat.....	bushels.. 1.38	1.25 to 1.75

COMPOSITE CROP YIELDS.

TABLE 401.—Composite numbers of all crop yields.

The figures below are obtained in the following manner: For each State the average yield per acre of each crop (as corn, wheat, cotton, etc.) is reduced to its 10-year average yield per acre; these percentages are combined into a composite or general average, viz., the figures shown. The relative importance of each crop is taken into consideration in making the composite averages.

State and Division.	1921	1920	1919	1918	1917	State and division.	1921	1920	1919	1918	1917
Maine.....	95	90	103	100	100	North Dakota.....	82	91	69	108	65
New Hampshire..	94	104	105	106	110	South Dakota.....	87	104	89	129	115
Vermont.....	87	104	104	97	110	Nebraska.....	104	137	114	78	103
Massachusetts....	93	107	103	98	105	Kansas.....	102	129	111	82	92
Rhode Island.....	95	98	101	103	114	N. C. west of Mississippi River.....	95.6	113.0	100.2	101.1	104.6
Connecticut.....	102	104	100	98	107	Kentucky.....	93	105	95	100	109
New York.....	84	110	107	102	108	Tennessee.....	97	105	96	96	105
New Jersey.....	92	121	97	100	102	Alabama.....	82	87	82	101	90
Pennsylvania.....	94	103	105	102	101	Mississippi.....	86	90	92	102	103
North Atlantic...	90.3	107.9	101.8	101.2	104.6	Louisiana.....	95	97	87	85	95
Delaware.....	88	111	91	91	104	Texas.....	92	114	124	65	74
Maryland.....	90	112	98	100	106	Oklahoma.....	105	140	129	67	87
Virginia.....	86	109	102	105	108	Arkansas.....	92	107	98	76	110
West Virginia....	91	109	102	99	103	South Central...	92.9	107.4	105.5	83.6	93.0
North Carolina....	85	107	92	106	97	Montana.....	84	83	40	60	55
South Carolina....	74	99	94	98	102	Wyoming.....	86	113	65	105	88
Georgia.....	73	88	85	97	97	Colorado.....	99	105	90	96	103
Florida.....	90	96	92	99	94	New Mexico.....	96	107	104	96	85
South Atlantic...	80.8	100.4	93.1	100.3	100.7	Arizona.....	110	97	112	94	100
Ohio.....	89	107	105	102	111	Utah.....	108	103	75	94	109
Indiana.....	88	106	96	110	109	Nevada.....	100	90	88	92	106
Illinois.....	94	101	97	111	120	Idaho.....	98	98	82	89	91
Michigan.....	85	109	100	90	98	Washington.....	108	92	94	75	83
Wisconsin.....	89	112	107	114	103	Oregon.....	104	103	98	80	82
N. C. east of Mississippi River.	89.8	106.2	100.6	106.0	110.0	California.....	95	96	99	88	103
Minnesota.....	84	97	89	123	111	Far Western.....	98.3	96.9	83.5	85.3	91.2
Iowa.....	99	113	107	104	111	United States...	91.7	106.9	99.8	97.6	102.0
Missouri.....	102	114	103	84	124						

COMPOSITE CROP CONDITIONS, MONTHLY.

The character of seasons in past years for crops in the United States is indicated in the accompanying table of the composite condition of all important crops, monthly, during the growing period, 100 representing an average condition:

TABLE 402.—Composite condition of growing crops, monthly, 1910-1921.

Year.	June 1.	July 1.	Aug. 1.	Sept. 1.	Oct. 1.	Nov. 1.	Year.	June 1.	July 1.	Aug. 1.	Sept. 1.	Oct. 1.	Nov. 1.
1910..			93.5	97.2	99.6	99.3	1916..	97.7	101.6	97.4	94.6	94.5	95.1
1911..	97.2	89.3	85.4	84.8	86.7	90.6	1917..	94.2	97.8	99.8	102.5	102.4	102.0
1912..	99.1	98.8	100.3	104.1	110.0	107.7	1918..	102.9	101.6	98.9	94.1	96.6	97.6
1913..	98.9	98.2	95.5	89.9	90.3	93.3	1919..	104.7	102.4	97.8	98.8	98.7	90.8
1914..	102.2	101.5	98.0	97.9	90.4	102.3	1920..	94.8	99.7	105.3	107.0	106.9	106.9
1915..	102.3	102.3	103.9	105.5	106.9	108.0	1921..	93.2	96.4	93.0	92.9	91.1	91.7

WEIGHTS PER BUSHEL.

A bushel is regarded as a definite weight rather than a cubic measure in the estimates of production and prices made by the Bureau of Markets and Crop Estimates. The weights which are regarded as a bushel for various products are as follows: Wheat, 60 pounds; corn, 56 pounds if shelled, 70 pounds if in ear; oats, 32 pounds; barley, 48 pounds; rye, 56 pounds; buckwheat, 48 pounds; white (Irish) potatoes, 60 pounds; sweet potatoes, 55 pounds; apples, 48 pounds; pears, 48 pounds; peaches, 48 pounds; walnuts and hickory nuts, 50 pounds; beans (dry), 60 pounds; onions, 57 pounds; turnips, 55 pounds; clover seed, 60 pounds; alfalfa seed, 60 pounds; timothy seed, 45 pounds; kafir corn, 56 pounds. Estimates of yields and prices in tons are always on the basis of 2,000 pounds.

TABLE 403.—*Estimated average weight in pounds per measured bushel of wheat, oats, and barley, of the yearly crops of the United States.*

Year.	Wheat.	Oats.	Barley.	Year.	Wheat.	Oats.	Barley.
	Pounds.	Pounds.	Pounds.		Pounds.	Pounds.	Pounds.
1902.....	57.3	31.0	.....	1912.....	58.3	33.0	46.8
1903.....	57.4	29.7	.....	1913.....	58.7	32.1	46.5
1904.....	55.5	31.5	.....	1914.....	58.0	31.5	46.2
1905.....	57.5	32.7	.....	1915.....	57.9	33.0	47.4
1906.....	58.3	32.0	.....	1916.....	57.1	31.2	45.2
1907.....	58.2	29.4	.....	1917.....	58.5	33.4	46.6
1908.....	58.3	29.8	.....	1918.....	58.8	33.2	46.9
1909.....	57.9	32.7	.....	1919.....	56.3	31.1	45.2
1910.....	58.5	32.7	46.9	1920.....	57.4	33.1	46.0
1911.....	57.8	31.1	46.0	1921.....	56.6	28.3	44.4

INTEREST ON SHORT-TIME LOANS.

The interest rates charged by banks to farmers of the United States for short-time loans averaged in April, 1921, about 7.95 per cent as compared with 7.61 per cent in 1920 and 7.75 per cent in 1913.

These figures are based upon reports received from county banks in answer to the following question:

"What is the average of the current rates of interest paid to banks by farmers for three to six months' loans? (Rate which will represent as nearly as possible the average of all such loans, secured and unsecured.) What was the average for similar loans a year ago?"

The results by States and grand divisions are shown in the accompanying table.

The main purpose of the inquiry was to ascertain the differences of the averages of the various States and sections; and to ascertain what changes have occurred since the previous investigation made in 1913 (results with detailed comments, published in the Crop Reporter for April, 1913).

The Georgia average rate, 10.36, which is the highest of all the State averages, is about 73 per cent higher than the lowest State average, 6.00, reported from several North Atlantic States. However, in 1913 the highest State average was almost 100 per cent higher than the lowest average. The figures generally indicate that the spread in the different sections of the country is not quite so wide now as formerly.

TABLE 404.—*Interest rates, by banks, for short-time loans to farmers, in April of years indicated.*

State and division.	1921	1920	1913	1912	State and division.	1921	1920	1913	1912
Maine.....	6.38	6.05	6.14	6.06	North Dakota.....	9.79	9.41	10.70	10.89
New Hampshire.....	6.00	6.00	5.80	5.80	South Dakota.....	9.48	8.66	9.48	9.69
Vermont.....	6.00	6.00	6.00	6.00	Nebraska.....	8.80	8.04	8.00	7.99
Massachusetts.....	6.75	6.25	5.66	5.95	Kansas.....	8.37	8.04	8.37	8.44
Rhode Island.....	6.33	6.00	5.95	5.91	N.C.W.Miss.R.....	8.33	7.89	8.05	8.11
Connecticut.....	6.21	6.21	5.02	5.92	Kentucky.....	6.50	6.25	6.86	6.84
New York.....	6.02	6.02	5.99	5.99	Tennessee.....	8.07	7.79	8.28	8.26
New Jersey.....	6.00	6.00	5.92	5.92	Alabama.....	9.00	8.50	10.02	10.00
Pennsylvania.....	6.00	5.97	5.93	5.93	Mississippi.....	8.15	8.00	8.26	9.54
N. Atlantic.....	6.08	6.02	5.96	5.96	Louisiana.....	8.69	8.23	8.33	8.25
Delaware.....	6.00	6.00	5.94	5.94	Texas.....	9.83	9.73	9.97	10.03
Maryland.....	6.00	5.99	5.93	5.92	Oklahoma.....	9.78	9.63	11.58	12.10
Virginia.....	6.26	6.14	6.21	6.21	Arkansas.....	9.74	9.65	9.67	9.66
West Virginia.....	6.00	6.00	6.21	6.28	S. Central.....	9.06	8.88	9.51	9.68
North Carolina.....	6.48	6.17	6.39	6.38	Montana.....	9.92	9.76	10.32	10.32
South Carolina.....	8.10	8.09	8.06	8.06	Wyoming.....	9.54	9.16	9.37	9.37
Georgia.....	10.36	9.94	9.98	9.67	Colorado.....	9.59	8.93	9.24	9.32
Florida.....	8.44	8.44	8.80	8.77	New Mexico.....	10.00	9.80	10.57	10.66
S. Atlantic.....	7.43	7.26	7.36	7.30	Arizona.....	.....	.....	10.15	10.70
Ohio.....	6.90	6.44	6.23	6.24	Utah.....	9.00	8.50	8.61	8.63
Indiana.....	7.35	6.86	6.47	6.46	Nevada.....	8.12	8.00	9.03	9.30
Illinois.....	6.98	6.52	6.31	6.25	Idaho.....	9.67	9.44	9.92	9.98
Michigan.....	6.94	6.40	6.88	6.82	Washington.....	8.67	8.49	8.99	9.06
Wisconsin.....	7.00	6.50	6.24	6.23	Oregon.....	8.42	8.24	8.32	8.27
N.C.E.Miss.R.....	7.04	6.56	6.38	6.35	California.....	7.63	7.47	7.44	7.43
Minnesota.....	8.40	7.89	7.93	8.05	Far Western.....	8.55	8.31	8.55	8.57
Iowa.....	7.66	7.42	7.21	7.23	United States.....	7.95	7.61	7.75	7.79
Missouri.....	7.57	7.20	7.28	7.28					

MONTHLY SALES FROM FARMS.

For every \$100 worth of product sold from the farm, about \$12.60 are sold in October, the month of heaviest total sales; \$11.70 in November, \$10.50 in December, and \$10.10 in September—in the four months, \$44.90. Smallest sales are in May and June, when the amount in each month is \$6.10 of the year's \$100.

Sales of crops alone are more concentrated in the fall months: for every \$100 worth of crops sold in a year, \$15.50 worth are sold in October, \$13.70 in November, \$12.60 in December, and \$12.40 in September; in the four months, \$56.20. Smallest sales (\$3.10) are in June.

Sales of live-stock products are fairly evenly distributed through the year. For every \$100 worth of live-stock products sold in a year \$9.60 are sold in June, the highest proportion in any month, and \$7.50 in January, the lowest.

These estimates are based upon reports made by crop correspondents of the Bureau of Crop Estimates of their actual sales in 1914, modified when necessary to make the figures typical of sales in recent years. More than 5,000 reports were tabulated. As the correspondents are representative farmers, the averages of their reports in the United States and in the larger States are probably nearly the same as the averages for all the farmers in the States. Details of monthly sales are given in tabulation below.

TABLE 405.—*Monthly percentages of year's receipts from sales by farmers.*

[Monthly rate of sales from farms, averages for recent years, estimates based upon reports of actual monthly sales made by crop correspondents of Bureau of Crop Estimates.]

FROM SALES OF ALL KINDS.

Division.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
North Atlantic.....	7.0	6.3	7.6	7.9	7.8	6.9	7.4	8.6	10.1	11.1	10.8	8.5	100.0
South Atlantic.....	8.4	5.8	5.8	5.8	4.7	4.8	5.9	5.6	9.0	15.6	14.1	14.5	100.0
North Central east of Miss. R.....	8.4	7.0	9.2	7.7	7.6	8.3	7.7	8.3	9.0	8.1	8.9	9.8	100.0
North Central west of Miss R.....	10.0	8.5	8.1	8.0	6.0	5.7	6.2	6.8	10.7	10.7	10.1	10.2	100.0
South Central.....	8.6	6.0	5.9	5.0	4.8	4.0	5.6	5.1	11.9	16.0	14.9	12.2	100.0
Far Western.....	6.4	4.2	5.5	7.4	5.0	6.8	4.9	6.1	9.3	20.0	16.0	8.4	100.0
United States.....	8.5	6.8	7.4	6.9	6.1	6.1	6.4	6.9	10.1	12.6	11.7	10.5	100.0

FROM SALES OF CROPS.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
North Atlantic.....	5.3	4.5	5.5	5.1	4.8	3.3	5.8	10.4	13.9	15.4	15.7	10.3	100.0
South Atlantic.....	8.7	5.0	4.3	4.5	2.7	2.7	5.1	5.0	8.5	15.3	19.0	19.2	100.0
North Central east of Miss. R.....	6.6	6.9	7.6	6.7	6.5	5.9	9.3	12.9	12.3	8.3	9.3	7.7	100.0
North Central west of Miss R.....	8.1	6.3	5.8	4.6	4.4	2.6	7.1	7.3	15.0	13.6	13.2	12.0	100.0
South Central.....	7.4	4.2	4.4	3.1	2.1	2.3	5.8	4.8	12.3	19.3	19.1	15.2	100.0
Far Western.....	7.1	3.2	4.0	4.0	3.0	2.6	5.0	8.2	10.2	22.8	19.7	10.2	100.0
United States.....	7.4	5.2	5.3	4.6	3.9	3.1	6.5	7.8	12.4	15.5	15.7	12.6	100.0

FROM SALES OF LIVE STOCK.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
North Atlantic.....	7.5	6.4	9.6	10.8	10.6	5.2	5.8	5.6	8.8	9.6	12.7	7.4	100.0
South Atlantic.....	8.0	5.6	7.7	6.1	5.9	6.3	5.9	5.4	10.4	21.4	8.4	8.9	100.0
North Central east of Miss. R.....	9.8	6.8	10.9	7.9	7.0	9.5	6.1	5.0	7.5	7.9	9.4	12.2	100.0
North Central west of Miss R.....	12.6	10.3	10.1	7.9	6.0	6.9	4.9	6.5	7.7	9.3	8.3	9.5	100.0
South Central.....	9.9	8.6	8.0	7.1	4.2	5.2	5.0	5.4	12.5	13.6	11.1	9.1	100.0
Far Western.....	5.9	4.5	5.0	11.3	5.3	9.2	4.5	2.4	9.4	21.9	14.6	6.0	100.0
United States.....	10.3	8.1	9.2	8.2	6.2	7.4	5.3	5.5	8.7	11.8	9.8	9.5	100.0

FROM SALES OF LIVE-STOCK PRODUCTS.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
North Atlantic.....	7.8	7.6	8.3	8.7	9.2	9.1	8.7	8.4	8.0	8.7	7.7	7.8	100.0
South Atlantic.....	7.9	8.0	7.5	8.4	8.1	9.2	7.5	7.9	8.9	8.9	8.7	9.0	100.0
North Central east of Miss. R.....	8.0	7.4	8.4	9.1	10.0	9.5	8.6	7.7	7.7	7.9	7.8	7.9	100.0
North Central west of Miss. R.....	6.4	8.0	7.8	9.4	9.9	10.7	8.9	7.9	8.3	7.3	8.0	7.4	100.0
South Central.....	8.7	8.6	9.1	9.3	8.4	8.1	7.4	6.6	7.0	7.7	9.1	10.0	100.0
Far Western.....	6.3	5.9	7.0	8.0	8.5	10.7	8.7	8.6	7.4	10.4	10.6	7.9	100.0
United States.....	7.5	7.6	8.1	8.9	9.3	9.6	8.5	8.0	7.9	8.3	8.3	8.0	100.0

RECEIPTS FROM FARM SALES.

About 10,000 crop correspondents of the Bureau of Markets and Crop Estimates have reported their year's total value of all sales of farm products, divided into four classes, viz., (1) live animals, (2) animal products, (3) crops, (4) miscellaneous. Correspondents were requested to give their 1914 sales if that year was representative; if 1914 sales were not normal, they were to give figures which would be typical of sales in recent years.

Of every \$100 worth of products sold by all who reported approximately \$36 were for live animals, \$20 were for the products of live stock, \$40 were for crops, and \$4 represented miscellaneous items. As the correspondents are representative farmers, the averages of their reports in the United States and in the larger States are probably nearly the same as the averages for all the farmers in the States.

The character of farmers' sales varies widely in different sections of the country. In the cotton States, as would be expected, by far the greater part of the sales are as crops. Thus, in Georgia, for every \$100 worth of products sold, \$75 represents crops, \$14 live animals, \$8 animal products, and \$3 miscellany. Even in Texas, regarded as a cattle as well as a cotton State, cotton so far predominates that \$72 represents crops, \$16 live animals, and \$9 animal products out of every \$100 of sales. It may be that the cattle section of the State is not so fully represented in the returns as the cotton section; but complete returns from all farmers probably would not materially modify these figures.

TABLE 406.—Receipts from the sale of (1) live stock, (2) live-stock products, (3) crops, (4) miscellaneous, out of every \$100 received from all sales; average of recent years.

[From tabulation of reports from crop correspondents of the Bureau of Crop Estimates.]

State.	Live stock.	Live-stock products.	Crops.	Miscellaneous.	State.	Live stock.	Live-stock products.	Crops.	Miscellaneous.
Maine.....	\$15	\$42	\$35	\$3	Minnesota.....	\$33	\$20	\$43	\$4
New Hampshire.....	20	51	25	4	Iowa.....	63	12	22	3
Vermont.....	18	64	10	8	Missouri.....	62	13	21	4
Massachusetts.....	19	50	27	5	North Dakota.....	25	6	66	3
Rhode Island.....	12	62	22	1	South Dakota.....	41	18	36	5
Connecticut.....	14	62	24	2	Nebraska.....	56	9	32	3
New York.....	6	53	27	6	Kansas.....	39	16	42	3
New Jersey.....	6	26	62	6	Kentucky.....	45	19	31	5
Pennsylvania.....	21	42	32	5	Tennessee.....	42	12	40	6
Maryland and Delaware.....	23	32	42	3	Alabama.....	17	14	66	3
Virginia.....	46	15	35	4	Mississippi.....	12	8	76	4
West Virginia.....	58	23	13	6	Louisiana.....	13	9	72	6
North Carolina.....	18	15	60	7	Texas.....	16	9	72	3
South Carolina.....	8	12	72	8	Oklahoma.....	32	11	53	4
Georgia.....	14	8	75	3	Arkansas.....	34	11	48	7
Florida.....	16	16	64	4	Mountain States ¹	49	13	34	4
Ohio.....	41	22	31	6	Washington.....	16	46	36	2
Indiana.....	50	16	30	4	Oregon.....	33	32	30	5
Illinois.....	42	20	35	3	California.....	15	12	72	14
Michigan.....	34	30	31	5					
Wisconsin.....	31	47	17	5	United States.....	36	20	40	4

¹ Including Montana, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, and Idaho.

PRODUCTIVITY OF VARIOUS COUNTRIES.

Index figures are usually applied to price comparisons, but they can as readily be used to compare the relative productivity of different countries. Six crops—wheat, oats, rye, barley, corn, and potatoes—comprise the bulk of crop production in most countries of the world. Of the total area in cultivated crops (before the war), excluding hay and grass crops, they comprised in Germany approximately 82 per cent; in France, 75 per cent; United Kingdom, 72; Denmark, 79; Holland, 70; Belgium, 75; Austria, 84; Hungary, 87; Italy, 45; Spain, 65; Roumania, 92; European Russia, 87; Asiatic Russia, 91; Bulgaria, 85; Algeria, 85; Japan, 31; Australia, 91; Canada, 91; Argentina, 88; United States, 82 per cent. Although these figures are only approximations, they are sufficiently accurate to indicate that index numbers of the relative yields per acre of these six products combined would fairly represent the relative per acre productivity of the various countries. For each country the average yield per acre for a series of years was obtained (except in a few countries where data for only one or two years were obtainable), and these average yields were reduced to their percentage of the average yield of all countries. The percentages for each country were combined, weighted in proportion to the relative acreage of the various crops in the country, to obtain the index number of production. Following is the result obtained, 100 representing the weighted average of all countries:

TABLE 407.—Index numbers of productivity of countries named.

Belgium.....	221	Sweden.....	136	Australia.....	76
Switzerland.....	202	Norway.....	128	Serbia.....	76
Netherlands.....	190	France.....	123	Argentina.....	75
United Kingdom.....	177	Austria.....	120	Portugal.....	73
Germany.....	169	Hungary.....	113	Russia, European.....	72
Denmark.....	168	United States.....	108	Russia, Asiatic.....	71
New Zealand.....	167	Italy.....	96	Uruguay.....	70
Egypt.....	161	Rumania.....	94	Algeria.....	65
Japan.....	137	Spain.....	93	Mexico.....	52
Canada.....	136	Bulgaria.....	87	Tunis.....	37
Chile.....	136	India.....	84		

WORLD PRODUCTION AND EXPORT TRADE.

TABLE 408.—*Production and export trade of the world in important crops, average, 1909-1913, in millions, i. e., 000,000 omitted.*

[Substantially the total production and exports for the world. However, China's probably large cotton production, also some minor items of production and exports for other countries, are omitted owing to lack of trustworthy information. One short ton=2,000 pounds.]

Crop.	Production.		Exports.			
	World.	United States production.	World.	Contributed by United States.	World crop exported.	United States crop exported.
Wheat.....bushels..	3,726	<i>Per cent.</i> 18	745	<i>Per cent.</i> 13	<i>Per cent.</i> 20	<i>Per cent.</i> 15
Corn.....do.....	3,807	71	745	17	7	2
Oats.....do.....	4,324	26	1,234	15	15	11
Barley.....do.....	1,468	12	1,300	13	120	14
Rye.....do.....	1,788	2	1,108	10.8	16	12
Potatoes.....do.....	5,471	6	175	12	11	10.5
Tobacco.....pounds..	2,712	37	929	41	34	38
Rice.....do.....	110,780	0.6	12,721	0.1	11	2
Cotton.....500-pound bales..	21.1	62	14.0	64	66	69
Sugar.....short tons..	13.7	5	7.5	0.5	40	4

¹ Three-year average, 1911-1913.

INDEX NUMBERS OF CROP AND MEAT-ANIMAL PRICES.

TABLE 409.—*Index numbers of crop and meat-animal prices, monthly and average, 1908-1921.*

The trend of prices to farmers for important crops is indicated in the following figures; the base 100 is the average price December 1 in the 43 years 1868-1908 of wheat, corn, oats, barley, rye, buckwheat, potatoes, hay, flax, and cotton.

CROPS.

Year.	Jan. 1.	Feb. 1.	Mar. 1.	Apr. 1.	May 1.	June 1.	July 1.	Aug. 1.	Sept. 1.	Oct. 1.	Nov. 1.	Dec. 1.	Yearly aver. ¹
1908....	120.1	122.2	124.3	125.7	127.5	136.6	135.3	135.5	130.8	127.2	119.6	117.4	125.1
1909....	117.8	120.4	126.3	130.6	139.6	146.5	149.5	142.3	132.9	130.5	129.3	127.7	130.9
1910....	134.1	138.5	139.9	138.8	133.5	133.5	133.1	137.1	137.0	129.8	122.2	118.4	130.6
1911....	118.6	119.8	117.9	118.0	122.2	127.7	136.3	148.2	141.6	138.0	135.6	133.1	131.8
1912....	133.9	140.2	144.7	153.4	166.3	168.3	160.1	148.0	137.6	128.6	118.3	110.3	134.6
1913....	110.9	112.6	113.3	113.6	116.2	121.2	122.9	125.4	136.3	139.1	133.9	132.7	126.7
1914....	132.5	132.1	133.8	134.2	135.9	138.8	137.7	137.6	141.3	138.4	127.4	122.8	132.9
1915....	126.7	140.5	144.0	144.5	150.0	147.3	139.1	138.9	132.5	123.2	124.4	123.4	132.1
1916....	129.0	139.9	138.6	140.2	143.3	145.8	144.8	147.7	161.5	163.6	178.8	187.9	158.3
1917....	183.6	195.6	206.5	225.2	280.6	291.3	289.9	307.8	279.6	277.0	261.3	252.3	254.5
1918....	264.1	271.6	288.8	288.6	281.8	271.9	272.9	280.6	293.3	289.3	269.5	265.2	277.4
1919....	272.4	259.9	257.1	271.2	293.7	307.2	310.2	329.0	317.7	290.0	279.4	282.4	283.4
1920....	296.7	311.0	314.3	334.1	363.1	380.4	374.0	329.8	294.7	248.7	201.1	165.5	271.9
1921....	158.5	151.4	147.5	139.3	128.7	134.6	130.6	133.8	134.5	137.3	121.4	120.9	134.7

MEAT ANIMALS.²

1910....	6.67	6.71	7.39	7.74	7.37	7.29	6.98	6.67	6.92	6.80	6.47	6.21	6.90
1911....	6.40	6.19	6.09	5.80	5.54	5.45	5.52	5.87	5.87	5.58	5.44	5.37	5.77
1912....	5.44	5.54	5.69	6.30	6.39	6.27	6.23	6.56	6.74	6.86	6.45	6.42	6.25
1913....	6.40	6.70	7.08	7.35	7.08	7.19	7.25	7.20	7.15	7.14	6.94	6.85	7.00
1914....	7.05	7.27	7.37	7.40	7.29	7.22	7.41	7.63	7.58	7.14	6.80	6.61	7.19
1915....	6.57	6.46	6.46	6.59	6.80	6.85	6.83	6.74	6.77	6.96	6.45	6.25	6.63
1916....	6.46	6.94	7.53	7.85	7.98	8.00	8.04	8.05	8.38	8.04	8.09	8.15	7.77
1917....	8.53	9.42	10.70	11.71	11.84	11.72	11.47	11.84	12.79	13.04	12.47	12.74	11.56
1918....	12.59	12.65	13.06	13.55	13.83	13.62	13.68	14.21	14.50	13.79	13.37	13.40	13.49
1919....	13.46	13.51	14.06	15.01	15.34	14.98	15.61	15.56	13.44	12.22	11.88	11.54	13.59
1920....	12.14	12.43	12.52	12.72	12.41	12.31	12.40	12.12	12.22	11.67	10.34	8.48	11.69
1921....	8.42	8.24	8.67	7.89	7.66	7.31	7.65	7.94	7.11	6.88	6.47	6.37	7.49

¹ Weighted average

² Prices 15th of month.

PRICES OF ARTICLES BOUGHT BY FARMERS.

TABLE 410.—Prices of articles bought by farmers, 1909–1921, and purchasing power of 1 acre of crops.

Article.	1909	1914	1919	1920	1921	Price per cent of 1914.			Purchasing power of 1 acre of crops, per cent of 1914.		
						1909	1920	1921	1909	1920	1921
Axes.....each	\$0.89	\$0.96	\$2.06	\$2.25	\$2.00	93	234	207	99	60	43
Barb wire.....100 pounds	2.98	3.08	5.73	6.10	5.20	97	198	169	95	71	52
Barrels.....each		.25	.50	.76	.51		304	204		47	43
Baskets.....do				.60	.50						
Bone meal.....tons		31.90	60.00	65.00	54.00		204	169		69	52
Brooms.....each	.34	.38	1.00	.98	.78	89	258	205	103	55	43
Buggies.....do	64.90	70.10	123.00	131.00	108.00	93	187	154	99	76	57
Buggy whips.....do	.404	.428	.73	.85	.70	95	200	164	97	71	54
Calico.....yards	.06	.063	.23	.227	.142	95	360	225	97	39	39
Churns.....each	2.19	2.30	2.90	3.25	3.00	95	141	130	97	100	68
Coal.....ton	5.50	5.80	9.50	13.30	11.50	95	229	198	97	62	45
Coal oil.....gallon	.157	.139	.22	.25	.19	113	180	137	81	79	64
Coffee.....pound	.211	.245	.46	.41	.32	86	167	131	107	85	67
Corn knives.....each	.27	.29	.58	.65	.55	93	224	190	99	63	46
Cream separators.....do	63.10	59.30	95.00	102.00	90.00	106	172	152	87	82	58
Dinner plates.....½ dozen	.55	.57	1.40	1.58	1.31	96	277	230	96	51	38
Dish pans.....each	.32	.34	.83	.95	.75	94	279	221	98	51	40
Dung forks.....do	.70	.76	1.40	1.60	1.40	92	211	184	100	67	48
Fertilizer, commercial.....ton	22.15	23.20	42.00	44.00	35.00	95	190	151	97	74	58
Flour.....barrel	6.30	6.40	13.50	12.90	8.50	98	202	137	94	70	64
Fruit jars.....dozen	.73	.74	1.15	1.25	1.16	99	169	157	93	84	56
Gasoline.....gallon	.202	.179	.29	.33	.265	113	184	148	81	77	60
Gloves, cotton.....pair			.26	.27	.19						
Gloves, leather.....do			1.73	1.85	1.30						
Grind stones.....pound			.048	.05	.045						
Halters.....each	.85	.95	1.85	1.98	1.55	89	208	163	103	68	54
Harness, single.....do	13.50	13.25	29.00	32.00	25.00	89	210	164	103	67	54
Harrows.....do				30.00	25.50						
Hatchets.....do	.59	.62	1.29	1.50	1.29	95	242	208	97	58	42
Hats, felt.....do	1.94	2.03	4.30	5.00	3.50	96	246	172	96	58	51
Hoes.....do	.41	.45	.83	.93	.80	91	207	178	101	68	50
Horse blankets.....do	2.25	2.40	5.00	5.35	4.15	94	223	173	98	63	51
Jumpers.....do	.77	.83	2.50	2.50	1.55	93	301	187	99	47	47
Kitchen chairs.....do	.72	.80	1.70	2.10	1.65	90	262	206	102	54	43
Lamps.....do	.50	.52	.98	1.10	.95	96	212	183	96	67	48
Lanterns.....do	.77	.80	1.32	1.45	1.30	96	181	162	96	78	55
Lard.....pound	.132	.141	.34	.285	.16	94	188	113	98	75	78
Line.....barrel	1.29	1.36	2.65	3.10	2.65	95	228	195	97	62	45
Linseed oil.....gallon	.79	.82	2.50	2.21	1.22	96	270	149	96	52	39
Lumber, 1-inch.....100 feet	1.95	2.10	4.75	5.15	3.55	93	245	169	99	58	52
Manure spreaders.....each	111.60	106.70	180.00	194.00	167.00	105	182	157	87	78	56
Men's suits.....do	13.15	14.00	33.10	41.00	30.30	94	293	216	98	48	41
Milk cans, 10 gallon.....do	2.42	2.45	6.00	6.20	5.30	98	253	216	94	56	41
Milk pails.....do	.43	.45	.90	1.00	.80	96	222	178	96	64	50
Mowers.....do	44.30	46.50	84.00	88.00	73.00	95	189	168	97	75	53
Muslin.....yard	.09	.093	.31	.30	.18	97	323	194	95	44	46
Nails.....100 pounds	3.34	3.40	6.50	7.30	5.75	98	215	169	94	66	52
Overalls.....pair	.82	.89	2.60	2.60	1.58	92	292	176	100	48	50
Padlocks.....each	.27	.275	.50	.60	.50	98	218	182	94	65	49
Paint brushes.....do	.49	.54	1.15	1.35	1.15	91	250	213	101	57	41
Paint, mixed.....gallon	1.62	1.74	4.05	4.30	3.35	93	247	193	99	57	46
Paris green.....pound	.29	.30	.62	.64	.52	97	213	173	95	66	51
Picks.....each	.71	.72	1.40	1.50	1.22	99	208	169	93	68	52
Pincers.....do	.49	.51	.95	1.10	.90	96	216	170	96	66	50
Pitch forks.....do	.62	.66	1.30	1.45	1.22	94	220	185	98	64	48

PRICES OF ARTICLES BOUGHT BY FARMERS—Continued.

TABLE 410.—Prices of articles bought by farmers. 1909–1921, and purchasing power of 1 acre of crops—Continued.

Article.	1909	1914	1919	1920	1921	Price per cent of 1914.			Purchasing power of 1 acre of crops, per cent of 1914.		
						1909	1920	1921	1909	1920	1921
Plows, turning.....each..	\$11.50	\$12.10	\$21.00	\$23.00	\$20.00	95	190	165	97	74	54
Portland cement, 100 pounds..	.70	.69	1.05	1.30	1.02	101	188	148	91	75	60
Raincoats.....each..	4.25	4.40	9.20	10.50	7.50	97	239	170	95	59	52
Rope, hemp.....pound..	.135	.149	.36	.355	.26	91	238	174	101	59	51
Rubber boots.....pair..	3.55	3.75	5.10	5.30	4.55	95	141	121	97	100	73
Sacks, grain.....each..	.15	.163	.45	.42	.26	92	258	160	100	55	55
Saddles.....do.....	17.45	20.35	42.40	45.00	35.00	86	221	172	107	64	51
Salt, for stock.....barrel..	1.50	1.65	3.00	3.50	3.20	91	212	194	101	67	46
Saws, buck.....each..	.89	.92	1.75	1.90	1.50	97	207	163	95	68	54
Screw hooks.....box.....		.37	.75	.91	.71		246	192		58	46
Scythes.....each..	1.02	1.06	1.82	2.10	1.85	96	198	174	96	71	51
Sheeting.....yard.....	.17	.18	.58	.57	.40	94	317	222	98	45	40
Shingles.....M.....	3.50	3.70	7.90	8.10	5.80	95	219	157	97	65	56
Shirts, flannel.....each..	1.34	1.41	3.85	3.90	2.85	95	277	202	97	51	44
Shoes.....pair.....	2.00	2.30	4.75	5.00	3.65	87	217	159	106	65	56
Shot guns.....each..	12.45	12.85	28.00	33.00	29.00	97	257	226	95	55	39
Shovels.....do.....	.74	.78	1.62	1.85	1.55	95	237	199	97	60	44
Staples.....100 pounds..	3.69	3.75	6.80	7.60	6.20	98	203	165	94	70	54
Starch.....pound.....	.07	.07	.118	.125	.103	100	179	147	92	79	60
Steel wire.....100 pounds..	3.43	3.55	6.90	7.30	6.00	97	206	169	95	69	52
Stoves.....each..	22.50	24.00	50.00	61.00	52.00	94	254	217	98	56	41
Sugar.....pound.....	.058	.069	.15	.17	.073	84	246	106	109	58	83
Sulphur.....do.....	.075	.08	.119	.12	.105	94	150	131	98	94	67
Tedders.....each..	39.00	39.50	74.00	78.50	69.00	99	199	175	93	71	50
Tin pails.....do.....	.25	.27	.59	.56	.50	93	241	185	99	59	48
Tobacco, plug.....pound..	.45	.45	.93	.94	.85	100	209	189	92	68	47
Twine, binder.....do.....	.103	.112	.258	.20	.16	92	179	143	100	79	62
Wagons, double.....each..	66.00	73.25	138.00	155.00	134.00	90	211	183	102	67	48
Wagons, single.....do.....	45.50	48.00	83.00	95.00	79.00	95	198	165	97	71	54
Walking cultivators.....do.....			35.20	40.00	34.00						
Wheel barrows.....do.....	2.80	2.97	5.50	6.50	5.50	94	219	185	98	65	48
Wire fence.....rod.....	.311	.317	.59	.64	.53	98	202	167	94	70	53
Wooden buckets.....each..	.31	.35	.98	1.05	.90	89	300	257	102	47	34
Wooden wash tubs.....do.....	.77	.83	1.75	1.90	1.50	93	229	181	99	62	49
Average.....						95	224	176	97	65	52

FARM LABOR.

TABLE 411.—Wages of male farm labor by classes and States, 1910 and 1921.

State and division.	Per month.				Per day at harvest.				Per day other than harvest.			
	With board.		Without board.		With board.		Without board.		With board.		Without board.	
	1921	1910	1921	1910	1921	1910	1921	1910	1921	1910	1921	1910
Maine.....	\$40.00	\$23.50	\$59.00	\$34.50	\$2.60	\$1.50	\$3.25	\$1.95	\$2.15	\$1.23	\$2.80	\$1.60
New Hampshire.....	39.00	23.50	61.00	35.50	2.55	1.35	3.30	1.84	2.20	1.18	2.95	1.65
Vermont.....	39.00	25.00	56.50	35.50	2.45	1.75	3.10	2.25	2.10	1.21	2.75	1.60
Massachusetts.....	41.00	22.75	67.00	37.20	2.60	1.42	3.45	1.92	2.25	1.22	3.05	1.66
Rhode Island.....	43.00	21.00	68.00	34.00	2.90	1.35	3.75	2.05	2.45	1.12	3.25	1.56
Connecticut.....	40.00	21.00	67.00	36.00	2.55	1.55	3.40	2.00	2.10	1.07	3.10	1.55
New York.....	40.00	23.50	58.50	35.00	2.95	1.80	3.60	2.22	2.40	1.28	3.05	1.66
New Jersey.....	37.00	19.50	59.50	31.50	3.00	1.70	3.95	2.15	2.20	1.11	2.95	1.46
Pennsylvania.....	35.00	18.75	52.00	29.00	2.60	1.50	3.25	1.96	2.05	1.04	2.70	1.49
North Atlantic.....	38.06	21.65	57.25	33.19	2.73	1.63	3.45	2.08	2.20	1.17	2.90	1.58
Delaware.....	30.00	16.00	45.00	24.75	2.40	1.35	2.80	1.55	1.60	.98	2.05	1.22
Maryland.....	29.00	13.50	43.00	21.50	2.35	1.26	2.95	1.64	1.60	.88	2.15	1.18
Virginia.....	26.00	14.00	37.00	19.50	1.95	1.15	2.40	1.44	1.40	.78	1.80	1.01
West Virginia.....	33.50	19.40	48.10	29.00	2.30	1.28	2.65	1.65	1.70	.94	2.30	1.27
North Carolina.....	22.00	13.60	32.00	19.50	1.50	1.03	1.80	1.28	1.25	.73	1.60	.97
South Carolina.....	17.00	12.00	24.00	16.50	1.26	.96	1.48	1.12	.94	.70	1.17	.90
Georgia.....	16.50	13.00	24.10	18.00	1.17	.98	1.47	1.23	.94	.73	1.20	.95
Florida.....	24.00	15.00	35.40	25.00	1.35	1.10	1.85	1.46	1.20	.96	1.70	1.32
South Atlantic.....	22.33	13.77	32.28	19.75	1.59	1.07	1.97	1.33	1.22	.77	1.58	1.01
Ohio.....	33.40	21.00	46.00	29.00	2.65	1.67	3.32	2.07	2.05	1.20	2.62	1.57
Indiana.....	31.50	20.50	44.00	28.40	2.56	1.70	3.15	2.07	1.80	1.14	2.32	1.45
Illinois.....	36.80	24.50	49.40	32.90	2.85	1.90	3.44	2.30	2.08	1.31	2.60	1.63
Michigan.....	34.30	23.00	50.50	33.00	2.60	1.64	3.30	2.10	2.05	1.22	2.65	1.66
Wisconsin.....	39.20	26.00	56.00	37.25	2.65	1.76	3.40	2.20	2.20	1.35	2.90	1.78
N. C. east of Miss. R..	34.98	22.94	48.84	31.81	2.68	1.75	3.33	2.16	2.04	1.24	2.61	1.61
Minnesota.....	37.00	26.00	53.10	38.00	3.00	2.23	3.90	2.65	2.35	1.48	3.20	1.90
Iowa.....	39.60	28.00	52.50	39.00	2.78	2.12	3.40	2.51	2.18	1.57	2.74	1.98
Missouri.....	30.70	21.50	41.90	29.50	2.40	1.55	2.90	1.93	1.50	1.02	2.00	1.32
North Dakota.....	40.00	29.00	60.20	42.00	3.70	2.40	4.75	3.03	2.55	1.60	3.50	2.20
South Dakota.....	36.50	27.00	53.50	39.00	3.00	2.35	3.75	2.95	2.15	1.54	2.95	2.00
Nebraska.....	35.00	26.50	50.00	38.00	3.15	2.14	3.85	2.60	2.15	1.57	3.00	1.96
Kansas.....	35.00	24.00	50.70	34.00	4.00	2.18	4.70	2.57	2.40	1.42	3.80	1.84
N. C. west of Miss. R..	35.53	25.10	49.90	35.45	3.03	2.01	3.72	2.43	2.09	1.38	2.73	1.77
Kentucky.....	25.70	16.00	35.70	23.10	1.96	1.36	2.47	1.71	1.20	.85	1.60	1.12
Tennessee.....	23.60	14.00	33.00	20.00	1.70	1.14	2.05	1.44	1.14	.77	2.47	1.02
Alabama.....	17.00	13.00	24.70	18.50	1.15	.98	1.45	1.26	.98	.85	1.25	1.05
Mississippi.....	18.00	13.30	25.10	19.50	1.00	.93	1.35	1.22	1.00	.83	1.35	1.10
Louisiana.....	19.90	13.50	30.70	20.25	1.22	.90	1.55	1.25	1.15	.77	1.43	1.02
Texas.....	26.00	18.00	39.00	24.50	1.80	1.22	2.20	1.57	1.33	1.04	1.77	1.32
Oklahoma.....	27.30	19.10	40.80	28.10	2.60	1.60	3.20	1.97	1.75	1.11	2.20	1.47
Arkansas.....	21.70	16.25	32.00	24.00	1.50	1.20	1.95	1.55	1.13	.90	1.50	1.20
South Central.....	22.72	15.28	33.10	21.90	1.63	1.14	2.04	1.47	1.21	.89	1.70	1.15
Montana.....	42.10	38.00	63.00	50.00	2.92	2.05	3.65	2.80	2.21	1.77	2.98	2.36
Wyoming.....	41.00	35.00	62.00	49.00	2.60	1.90	3.30	2.50	2.10	1.73	2.90	2.29
Colorado.....	38.60	29.50	58.60	44.50	2.70	1.95	3.50	2.47	2.11	1.47	2.85	2.00
New Mexico.....	37.00	24.50	52.50	34.25	2.20	1.46	2.85	1.88	1.50	1.12	2.10	1.53
Arizona.....	40.00	30.00	60.00	40.00	2.25	1.72	3.00	2.24	1.75	1.34	2.50	2.04
Utah.....	51.80	35.00	69.50	47.50	2.55	1.78	3.15	2.20	2.30	1.55	2.90	2.00
Nevada.....	50.00	37.00	75.00	54.00	2.60	1.82	3.50	2.38	2.25	1.39	3.35	1.96
Idaho.....	47.00	35.00	67.00	49.50	2.80	2.20	3.60	2.80	2.25	1.70	3.05	2.27
Washington.....	48.00	32.00	68.00	50.00	3.30	2.42	4.00	2.78	2.40	1.72	3.20	2.26
Oregon.....	44.50	33.00	63.00	44.50	2.75	2.12	3.50	2.60	2.18	1.51	2.90	2.07
California.....	55.00	33.00	79.00	47.00	3.10	1.98	3.90	2.48	2.55	1.44	3.35	2.02
Far Western.....	47.29	32.69	68.01	46.48	2.87	2.02	3.63	2.52	2.26	1.51	3.01	2.06
United States.....	30.14	19.21	43.32	27.50	2.24	1.45	2.79	1.82	1.68	1.06	2.22	1.83

FARM LABOR—Continued.

TABLE 412.—Wages of classes of male farm labor, yearly, in United States, 1910-1921.

Year.	By the month.		Day labor at harvest.		Day labor not harvest.	
	With board.	Without board.	With board.	Without board.	With board.	Without board.
United States:						
1910.....	\$19.21	\$27.50	\$1.45	\$1.82	\$1.06	\$1.83
1911.....	20.18	28.77	1.49	1.85	1.09	1.42
1912.....	20.81	29.58	1.54	1.87	1.14	1.47
1913.....	21.38	30.31	1.57	1.94	1.16	1.50
1914.....	21.05	29.88	1.55	1.91	1.13	1.45
1915.....	21.26	30.15	1.56	1.92	1.13	1.47
1916.....	23.25	32.83	1.69	2.07	1.26	1.62
1917.....	28.87	40.43	2.08	2.54	1.56	2.02
1918.....	34.92	48.80	2.65	3.22	2.07	2.63
1919.....	39.82	56.29	3.15	3.83	2.45	3.12
1920.....	46.89	64.95	3.60	4.33	2.86	3.59
1921.....	30.14	43.32	2.24	2.79	1.68	2.22
North Atlantic States:						
1913.....	23.45	35.29	1.67	2.12	1.30	1.71
1919.....	42.18	63.39	3.09	3.86	2.59	3.30
1920.....	51.92	75.54	3.78	4.68	3.20	4.01
1921.....	38.06	57.25	2.73	3.45	2.20	2.90
North Central, East:						
1913.....	24.52	33.78	1.88	2.29	1.36	1.75
1919.....	42.12	58.90	3.56	4.32	2.71	3.44
1920.....	51.49	70.09	4.17	5.00	3.22	4.01
1921.....	34.98	48.84	2.68	3.33	2.04	2.61
North Central, West:						
1913.....	26.60	36.68	2.12	2.54	1.48	1.91
1919.....	50.29	68.10	4.48	5.33	3.22	4.03
1920.....	59.63	79.79	5.03	5.94	3.78	4.67
1921.....	35.53	49.90	3.03	3.72	2.09	2.73
South Atlantic:						
1913.....	15.88	22.62	1.16	1.45	.85	1.09
1919.....	30.54	44.03	2.28	2.52	1.85	2.39
1920.....	35.75	50.56	2.69	3.30	2.13	2.74
1921.....	22.33	32.26	1.59	1.97	1.22	1.58
South Central:						
1913.....	16.70	23.85	1.21	1.51	.93	1.18
1919.....	32.42	46.47	2.56	3.14	2.03	2.61
1920.....	36.53	51.94	2.80	3.41	2.29	2.89
1921.....	22.72	33.10	1.63	2.04	1.21	1.70
Far West:						
1913.....	33.52	48.17	2.02	2.53	1.52	2.07
1919.....	62.96	87.12	3.80	4.67	3.08	4.02
1920.....	73.21	99.43	4.48	5.39	3.66	4.61
1921.....	47.29	68.01	2.87	3.63	2.26	3.01

HOW FARM LABOR IS HIRED.

Of the total labor hired on farms of the United States, the percentage which is hired by the month, by the day, with board and without board, is estimated as follows, based upon reports of crop reporters of the Bureau of Crop Estimates:

TABLE 413.—Percentage of total hired labor, by divisions.

Item.	United States.	North Atlantic. ¹	North Central, east. ²	North Central, west. ³	South Atlantic. ⁴	South Central. ⁵	West. ⁶
Hired by the—							
Month—	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
With board.....	36.1	39.3	44.8	52.7	33.7	29.0	37.4
Without board.....	15.5	16.5	15.1	9.4	17.2	17.0	9.5
Day, excluding extra harvest—							
With board.....	15.3	14.2	15.5	13.8	17.4	14.8	13.7
Without board.....	15.7	13.7	9.2	4.8	16.6	21.0	14.9
Day, harvest labor—							
With board.....	10.5	9.0	10.8	15.9	8.3	9.7	16.9
Without board.....	6.9	7.3	4.6	3.4	6.8	8.5	7.6
	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Hired with board.....	61.9	62.5	71.1	82.4	59.4	53.5	68.0
Hired without board.....	38.1	37.5	28.9	17.6	40.6	46.5	32.0

¹ Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania.

² Ohio, Indiana, Illinois, Michigan, Wisconsin.

³ Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas.

⁴ Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida.

⁵ Kentucky, Tennessee, Alabama, Mississippi, Louisiana, Texas, Oklahoma, Arkansas.

⁶ Montana, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Idaho, Washington, Oregon, California.

FARM LABOR SUPPLY AND DEMAND.

TABLE 414.—Farm labor supply and demand, 1919-1922.

Division.	Farm labor supply, per cent of normal.				Farm labor demand, per cent of normal.				Per cent of supply to demand.			
	1919	1920	1921	1922	1919	1920	1921	1922	1919	1920	1921	1922
North Atlantic.....	82.8	62.3	92.1	99.2	101.0	107.8	92.7	94.8	81.9	57.8	99.4	104.6
South Atlantic.....	81.9	72.5	94.3	97.3	103.9	107.4	86.6	88.4	78.8	67.5	108.9	110.1
N. Cent. E. Miss. R.....	86.6	68.4	95.1	101.4	101.2	106.6	91.2	91.0	85.6	64.2	104.3	111.4
N. Cent. W. Miss. R.....	85.6	77.8	96.6	101.1	100.9	103.4	89.1	89.3	84.8	75.2	108.4	113.2
South Central.....	83.2	72.8	94.3	97.1	101.3	104.2	83.0	86.6	82.1	69.9	113.6	112.1
Far Western.....	90.0	82.1	102.3	107.0	102.4	101.5	89.0	89.9	87.9	80.9	114.9	119.0
United States.....	84.4	72.4	95.2	99.5	101.8	105.3	87.5	89.3	82.9	68.8	108.8	111.4

VALUE OF PLOW LANDS.

TABLE 415.—Value of plow lands, by States, 1919-1922.

State.	Average of poor plow lands.				Average of good plow lands.				Average of all plow lands.			
	1919	1920	1921	1922	1919	1920	1921	1922	1919	1920	1921	1922
Maine.....	\$24	\$30	\$25	\$22	\$50	\$56	\$50	\$47	\$37	\$42	\$36	\$35
New Hampshire.....	23	24	24	25	54	64	63	64	39	42	31	41
Vermont.....	30	30	29	27	64	69	67	63	44	48	47	45
Massachusetts.....	41	40	40	39	92	103	98	105	68	72	69	69
Rhode Island.....	47	50	50	50	92	105	105	105	73	85	85	86
Connecticut.....	37	35	34	32	80	100	90	90	55	60	58	58
New York.....	38	39	40	38	80	84	84	83	60	64	65	62
New Jersey.....	50	50	55	48	103	104	125	109	76	80	92	84
Pennsylvania.....	38	40	39	33	79	86	81	73	60	66	62	54
Delaware.....	36	44	38	31	70	86	72	67	55	66	56	50
Maryland.....	39	46	31	31	66	82	70	67	53	60	51	49
Virginia.....	31	34	32	27	62	73	70	60	47	53	50	43
West Virginia.....	29	32	31	27	64	75	70	62	44	51	48	42
North Carolina.....	31	42	36	33	67	87	76	67	50	63	55	49
South Carolina.....	27	41	32	23	56	82	68	46	45	61	50	35
Georgia.....	24	30	23	18	49	63	50	38	38	46	36	28
Florida.....	21	23	25	21	48	53	55	56	33	36	40	37
Ohio.....	63	69	60	52	113	132	110	100	91	105	88	78
Indiana.....	68	80	71	56	126	150	137	108	100	119	109	85
Illinois.....	100	115	105	91	170	213	195	160	144	170	157	131
Michigan.....	40	41	41	39	76	80	83	77	61	64	65	60
Wisconsin.....	60	66	65	58	110	125	122	110	89	100	98	87
Minnesota.....	59	73	74	67	88	120	121	102	78	100	101	87
Iowa.....	129	157	145	119	196	257	238	193	169	219	200	163
Missouri.....	51	60	58	44	91	110	106	84	72	87	83	65
North Dakota.....	28	31	30	25	43	49	49	44	37	43	42	37
South Dakota.....	50	67	66	52	77	103	102	80	67	90	85	72
Nebraska.....	67	85	80	72	115	150	140	123	95	125	115	101
Kansas.....	44	50	50	43	77	99	90	77	61	70	70	60
Kentucky.....	37	42	33	28	80	95	75	67	61	70	53	47
Tennessee.....	31	40	35	28	75	90	81	68	53	60	55	47
Alabama.....	17	20	17	14	33	43	38	32	24	30	26	23
Mississippi.....	16	23	16	16	34	49	36	34	26	35	26	25
Louisiana.....	25	34	24	21	44	65	50	42	33	50	38	31
Texas.....	27	36	33	29	58	72	70	60	46	56	52	47
Oklahoma.....	24	30	29	26	51	63	63	58	38	47	46	41
Arkansas.....	22	26	24	20	50	65	54	46	38	45	38	33
Montana.....	21	21	19	15	45	48	41	35	34	36	30	23
Wyoming.....	26	34	25	23	53	70	60	54	43	53	44	37
Colorado.....	36	40	35	35	80	86	84	60	66	67	61	61
New Mexico.....	30	36	30	23	60	60	60	57	45	45	45	41
Arizona.....	60	90	75	70	125	180	140	130	100	130	120	115
Utah.....	55	60	50	42	125	135	140	125	95	103	100	90
Nevada.....	50	46	45	40	110	110	90	80	85	80	75	70
Idaho.....	50	60	58	50	98	135	128	110	76	105	99	85
Washington.....	60	68	63	52	121	150	140	120	95	115	105	90
Oregon.....	53	60	60	55	108	130	135	110	81	100	103	90
California.....	69	70	75	69	165	175	200	193	121	130	135	128
United States.....	51	61	57	47	92	113	106	89	74	90	84	70

TRENDS IN AGRICULTURAL STATISTICAL DATA.

TABLE 416.—Trends in agricultural statistical data.

Year.	Index numbers, basis, 100= 5-year average, 1909-1913.							
	Land values.	Farm wages.	Crop prices.	Live-stock prices.	Crops and live stock.	Crop values per acre.	Articles farm-ers buy.	Crop yield per acre.
1899.....	45	68				57	86	
1909.....	93	98	101	95	98	101	97	101
1910.....	96	95	99	108	103	98	99	101
1911.....	99	99	101	90	96	97	100	93
1912.....	103	102	101	98	100	101	102	110
1913.....	109	105	98	110	104	104	103	95
1914.....	111	104	101	112	107	103	103	105
1915.....	123	105	101	104	102	108	112	110
1916.....	136	114	124	122	123	142	125	97
1917.....	153	142	198	181	189	209	153	104
1918.....	167	176	212	211	211	212	188	100
1919.....	202	207	221	212	217	232	212	102
1920.....	184	230	208	183	195	148	231	107
1921.....	156	149	103	117	110	114	181	94
Percentage change yearly.								
1910.....	+ 3	- 4	- 2	+14	+ 6	- 3	+ 2	+ 1
1911.....	+ 3	+ 5	+ 2	-16	- 7	- 1	+ 1	- 9
1912.....	+ 5	+ 3	0	+ 8	+ 4	+ 5	+ 2	+19
1913.....	+ 5	+ 3	- 3	+12	+ 4	+ 2	+ 1	-13
1914.....	+ 2	- 2	+ 3	+ 3	+ 3	0	0	+10
1915.....	+11	+ 1	0	- 8	- 4	+ 5	+ 9	+ 6
1916.....	+11	+ 9	+23	+17	+20	+31	+12	-12
1917.....	+13	+24	+60	+49	+54	+47	+22	+ 7
1918.....	+ 9	+24	+ 7	+17	+12	+ 1	+23	- 4
1919.....	+21	+18	+ 4	+ 1	+ 3	+ 9	+13	+ 2
1920.....	- 9	+11	- 6	-14	-10	-36	+ 9	+ 5
1921.....	-15	-35	-50	-36	-44	-23	-22	-12

NOTE.—Land values are obtained on Mar. 1 following the year shown on stub of tabulation; figures may be regarded as representing approximately values at the close of the years indicated, rather than average for entire year. Wage statistics are collected on Mar. 1 of the following year (1919 data collected in December); they are presumed to represent the average for the calendar year shown on stub, but they are probably influenced somewhat more by conditions in the last half of the year than by the first half. Crop prices and live-stock prices are calendar-year averages, obtained from monthly prices properly weighted. Figures for crops and live stock are the averages of the crop prices and live-stock figures as shown separately. The ratio of the value of all crops to the value of all live-stock products is usually about 6 to 4; but of total farm sales about 40 per cent are crops, 56 per cent live-stock and live-stock products, and 4 per cent miscellaneous. Crop values per acre are obtained by dividing the total value of the year's crop production based upon Dec. 1 prices by the total acres producing the crops. Prices of articles which farmers buy are obtained at the close of the year indicated, although they are assumed to be averages for the year, they probably are influenced more by conditions in the latter part than in the early part of the year.

GAS, ELECTRIC LIGHT, AND TELEPHONES ON FARMS.

TABLE 417.—Number of farms reporting gas and electric light, census of 1920.

[States arranged in order of size of percentage.]

State.	Number of farms reporting use of gas or electric light.	Per cent of all farms.	State.	Number of farms reporting use of gas or electric light.	Per cent of all farms.	State.	Number of farms reporting use of gas or electric light.	Per cent of all farms.
Utah.....	11,125	43.4	Oregon.....	5,463	10.9	Florida.....	2,042	3.8
Massachusetts..	9,062	28.3	Indiana.....	20,584	10.0	Oklahoma.....	7,010	3.7
California.....	30,519	25.9	Illinois.....	23,273	9.8	Montana.....	2,013	3.5
District of Columbia..	52	25.5	Nebraska.....	12,062	9.7	Alabama.....	8,345	3.3
Connecticut.....	3,963	17.5	Maine.....	4,625	9.6	North Carolina..	8,005	3.0
Rhode Island...	700	17.1	Wisconsin.....	16,574	8.8	South Carolina..	5,170	2.7
Iowa.....	32,552	15.3	Kansas.....	14,390	8.7	Kentucky.....	5,925	2.2
New Jersey.....	4,551	15.3	South Dakota..	6,445	8.6	Texas.....	8,228	1.9
Pennsylvania...	30,669	15.2	Michigan.....	15,695	8.0	Georgia.....	5,826	1.9
West Virginia...	12,900	14.8	Minnesota.....	13,539	7.6	Tennessee.....	4,554	1.8
Ohio.....	37,745	14.7	Maryland.....	3,330	7.0	New Mexico.....	422	1.4
Idaho.....	5,982	14.2	Colorado.....	3,925	6.5	Louisiana.....	1,471	1.1
Washington.....	9,178	13.8	Arizona.....	592	6.0	Mississippi.....	2,896	1.1
New York.....	24,882	12.9	North Dakota..	4,518	5.8	Arkansas.....	2,643	1.1
Nevada.....	385	12.2	Missouri.....	14,341	5.5	United States..	452,809	7.0
Vermont.....	3,328	11.4	Wyoming.....	717	4.6			
New Hampshire..	2,322	11.3	Virginia.....	7,874	4.2			
			Delaware.....	397	3.9			

TABLE 418.—Number of farms reporting telephones, census of 1920.

[States arranged in order of percentage.]

State.	Number of farms reporting telephones.	Per cent of all farms.	State.	Number of farms reporting telephones.	Per cent of all farms.	State.	Number of farms reporting telephones.	Per cent of all farms.
Iowa.....	183,852	86.1	New York.....	91,973	47.6	Maryland.....	11,755	24.5
Kansas.....	128,753	77.9	North Dakota..	36,349	46.8	Utah.....	6,295	24.5
Nebraska.....	95,050	76.4	Pennsylvania..	87,837	43.5	Arkansas.....	52,869	22.7
Illinois.....	173,647	73.2	West Virginia..	37,789	43.3	Tennessee.....	56,880	22.5
Indiana.....	136,140	66.4	Washington.....	27,952	42.2	Virginia.....	33,482	18.0
Missouri.....	163,543	62.2	Rhode Island..	1,685	41.3	Alabama.....	44,619	17.4
Ohio.....	159,478	62.1	Colorado.....	23,685	39.5	Montana.....	9,781	17.0
Minnesota.....	110,568	62.0	Oklahoma.....	71,613	37.3	Arizona.....	1,638	16.4
South Dakota..	44,327	59.4	Nevada.....	1,122	35.5	North Carolina..	33,218	12.3
Wisconsin.....	111,798	59.1	Idaho.....	13,837	32.9	New Mexico.....	3,359	11.3
Vermont.....	16,752	57.6	District of Columbia..	67	32.8	Mississippi.....	28,260	10.4
Connecticut.....	11,738	51.8	Texas.....	140,234	32.2	Georgia.....	31,231	10.1
Massachusetts..	16,537	51.7	New Jersey.....	9,484	31.9	Florida.....	4,524	8.4
Oregon.....	25,351	50.5	California.....	37,309	31.7	Louisiana.....	8,599	6.4
Michigan.....	97,874	49.8	Wyoming.....	4,449	28.3	South Carolina..	10,943	5.7
New Hampshire..	10,166	49.5	Delaware.....	2,763	27.3	United States..	2,508,002	38.9
Maine.....	23,632	49.0	Kentucky.....	73,145	27.0			

AUTOMOBILES, MOTOR TRUCKS, AND TRACTORS.

TABLE 419.—*Number of farms reporting automobiles, motor trucks, and tractors, census 1920.*

[The reported number of each machine somewhat exceeds the number of farms reporting.]

State.	Automobiles.		Motor trucks.		Tractors.	
	Number of farms reporting.	Per cent of all farms.	Number of farms reporting.	Per cent of all farms.	Number of farms reporting.	Per cent of all farms.
Maine.....	11,686	24.2	1,061	2.2	605	1.3
New Hampshire.....	4,797	23.4	663	3.2	196	1.0
Vermont.....	7,611	26.2	576	2.0	428	1.5
Massachusetts.....	8,181	25.6	3,136	9.8	540	1.7
Rhode Island.....	1,198	29.3	471	11.5	69	1.7
Connecticut.....	6,796	30.0	1,377	6.1	411	1.8
New York.....	68,003	35.2	8,636	4.5	7,021	3.6
New Jersey.....	11,731	39.5	3,075	10.4	845	2.8
Pennsylvania.....	69,865	34.5	8,761	4.3	5,374	2.7
Delaware.....	3,693	36.4	283	2.8	220	2.2
Maryland.....	16,045	33.5	2,556	5.3	1,410	2.9
District of Columbia.....	50	24.5	29	14.2	1	.5
Virginia.....	28,557	15.3	2,859	1.3	2,206	1.2
West Virginia.....	10,405	11.9	886	1.0	511	.6
North Carolina.....	41,839	15.5	2,551	1.0	2,184	.8
South Carolina.....	30,709	15.9	1,609	.8	1,213	.6
Georgia.....	47,173	15.2	2,913	.9	2,083	.7
Florida.....	8,761	16.2	1,500	2.8	602	1.1
Ohio.....	119,511	46.6	6,960	2.7	9,934	3.9
Indiana.....	95,233	46.4	3,501	1.7	8,871	4.3
Illinois.....	125,588	53.0	5,907	2.5	21,932	9.3
Michigan.....	78,919	40.2	4,681	2.4	5,584	2.8
Wisconsin.....	93,798	49.6	3,893	2.1	9,092	4.8
Minnesota.....	101,847	57.1	3,677	2.1	14,794	8.3
Iowa.....	156,081	73.1	8,669	4.1	19,427	9.1
Missouri.....	81,392	31.0	4,878	1.9	7,438	2.8
North Dakota.....	44,010	55.7	743	1.0	11,834	15.2
South Dakota.....	51,730	69.4	4,249	5.7	12,160	16.3
Nebraska.....	94,004	75.6	6,333	5.1	10,342	8.3
Kansas.....	102,517	62.0	3,782	2.3	16,128	9.8
Kentucky.....	28,532	10.5	1,455	.5	1,913	.7
Tennessee.....	22,446	8.9	1,362	.5	1,796	.7
Alabama.....	15,906	6.2	1,114	.4	739	.3
Mississippi.....	14,946	5.5	938	.3	598	.2
Louisiana.....	9,494	7.0	793	.6	2,142	1.6
Texas.....	99,697	22.9	5,124	1.2	8,084	1.9
Oklahoma.....	49,017	25.5	2,070	1.1	5,786	3.0
Arkansas.....	15,401	6.6	973	.4	1,423	.6
Montana.....	20,749	36.0	1,167	2.0	6,890	12.0
Wyoming.....	6,180	39.2	554	3.5	969	6.2
Colorado.....	28,356	47.3	2,884	4.8	4,526	7.6
New Mexico.....	5,546	18.6	552	1.9	457	1.5
Arizona.....	4,534	45.5	527	5.3	82	.2
Utah.....	8,246	32.1	544	2.1	553	2.2
Nevada.....	1,437	45.4	161	5.1	182	5.8
Idaho.....	16,651	39.6	779	1.9	1,468	3.5
Washington.....	27,626	41.7	3,172	4.8	2,474	3.7
Oregon.....	20,561	41.0	1,728	3.4	2,902	5.8
California.....	62,453	53.1	5,909	5.0	12,131	10.3
United States.....	1,979,564	30.7	131,551	2.0	229,334	3.6

RAILWAY FREIGHT TONNAGE.

TABLE 420.—Tonnage carried on railways in the United States, 1916–1921.¹

Product.	Year ending June 30— Class I and II roads, 1916. ²	Year ending Dec. 31—					
		Class I roads. ²					
		1916	1917	1918	1919	1920	1921
FARM PRODUCTS.							
Animal matter:	1,000 short tons.	1,000 short tons.	1,000 short tons.	1,000 short tons.	1,000 short tons.	1,000 short tons.	1,000 short tons.
Animals, live—							
Horses and mules.....	16,964	17,294	17,906	17,257	19,395	936	430
Cattle and calves.....						9,809	8,526
Sheep and goats.....						1,344	1,176
Hogs.....						5,421	5,506
Packing-house products—							
Dressed meats.....	2,656	2,808	2,966	3,714	3,398	2,770	2,579
Hides and leather.....	1,401	1,396	1,357	1,303	1,371	1,051	972
Other packing - house products.....	2,775	2,633	2,567	3,510	3,736	2,206	2,095
Total packing-house products.....	6,832	6,837	6,890	8,527	8,505	6,027	5,646
Eggs ³						536	551
Butter and cheese ³						425	435
Poultry (including game and fish).....	1,016	1,097	1,022	1,154	1,322	264	276
Wool.....	503	505	499	494	547	293	400
Other animal matter.....	4,629	4,741	5,541	6,338	5,724	1,540	1,327
Total animal matter.....	29,945	30,473	31,858	35,770	35,494	26,595	24,273
Vegetable matter:							
Cotton.....	4,052	4,212	3,552	3,550	3,803	3,379	3,186
Fruit and vegetables.....	13,192	17,621	17,679	18,736	19,726	10,045	9,204
Potatoes ³						4,118	4,639
Grain and grain products—							
Grain—							
Wheat.....	57,686	55,685	46,372	55,867	52,375	23,131	29,041
Corn.....						12,689	17,219
Oats.....						8,615	7,543
Other grain.....						5,669	4,569
Grain products—							
Flour.....	10,472	10,319	10,065	10,588	11,670	10,952	10,554
Other grain products	7,992	8,234	8,413	8,630	9,079	8,891	7,881
Total grain and grain products	76,151	74,238	64,850	75,084	73,123	69,947	76,807
Hay.....	7,313	7,243	8,314	8,239	7,483	7,957	5,163
Sugar, sirup, glucose, and molasses.....	3,917	3,762	4,235	4,204	4,934	5,664	4,767
Tobacco.....	1,086	1,016	1,029	1,160	1,293	1,081	933
Other vegetable matter.....	8,983	9,305	9,204	9,257	9,604	15,250	15,169
Total vegetable matter.....	119,699	117,398	108,865	120,230	119,967	117,441	119,868
Canned goods (food products) ³						3,074	2,626
Total farm products.....	149,644	147,871	140,723	156,000	155,461	147,110	146,767
OTHER FREIGHT.							
Products of mines.....	706,029	680,123	732,656	734,791	589,951	712,154	510,860
Products of forests.....	106,857	93,819	100,838	97,043	94,076	100,766	76,923
Manufactures.....	182,916	185,025	188,796	176,197	163,825	242,189	163,699
All other (including all freight in less than carload lots).....	92,776	95,162	101,006	99,032	92,799	53,202	42,080
Total tonnage.....	1,238,223	1,202,000	1,264,019	1,263,063	1,096,111	1,255,421	940,329

¹ Compiled from reports of the Interstate Commerce Commission. Original shipment only, excluding freight received by each railway from connecting railways and other carriers.² Roads having annual operating revenues in excess of \$1,000,000.³ Not separately stated prior to 1920.

CARLOAD WEIGHTS

TABLE 421.—Average weight per carload of freight originating on Class I railroads in the United States, during the three months ending June 30, 1920.

[Interstate Commerce Commission.]

Commodity.	Tons.	Commodity.	Tons.
Wheat.....	39.4	Hogs.....	9.7
Corn.....	36.2	Poultry.....	11.5
Oats.....	30.0	Eggs.....	11.6
Flour and meal.....	30.9	Butter and cheese.....	13.2
Hay, straw, and alfalfa.....	12.2	Wool.....	12.6
Tobacco.....	13.9	Sugar, sirup, glucose, and molasses.....	28.0
Cotton.....	12.4	Canned goods.....	24.8
Citrus fruits.....	17.5	Anthracite coal.....	48.0
Potatoes.....	18.7	Bituminous coal.....	50.1
Horses and mules.....	11.4	Textiles.....	12.8
Cattle and calves.....	11.7	Lumber, timber, box shooks, staves, and headings.....	26.8
Sheep and goats.....	10.3		

WAGON AND MOTOR-TRUCK HAULS.

TABLE 422.—Wagon and motor-truck hauls from farms to shipping points, 1906 and 1918.

Item.	Dis- tance.	Round trips per day.	Load.			Cost of hauling per ton per mile.		
			corn. ¹	Wheat.	Cotton.	Corn.	Wheat.	Cotton.
United States:	Miles.	Number	Bushels.	Bushels.	Bales.	Cents.	Cents.	Cents.
Motor trucks, 1918.....	11.3	3.4	58	84	6.6	15	15	18
Wagons, 1918.....	9.0	1.2	39	56	3.6	33	30	48
Wagons, 1906.....	9.7	1.2	39	55	3.4	19	19	27
<i>Geographic division.²</i>								
New England:								
Motor trucks, 1918.....	10.0	4.5	62	60	.....	11	14	.....
Wagons, 1918.....	7.2	1.8	38	45	.....	39	38	.....
Wagons, 1906.....	7.2	1.7	.....	.....	.....	.....	.....	.....
Middle Atlantic:								
Motor trucks, 1918.....	12.2	3.4	69	78	.....	14	14	.....
Wagons, 1918.....	7.6	1.6	39	47	.....	39	38	.....
Wagons, 1906.....	6.5	1.7	41	48	.....	24	26	.....
South Atlantic:								
Motor trucks, 1918.....	9.8	4.0	45	57	6.0	19	18	20
Wagons, 1918.....	8.4	1.4	29	36	3.5	41	39	48
Wagons, 1906.....	9.9	1.2	35	42	3.1	28	24	27
North Central, east:								
Motor trucks, 1918.....	9.3	4.8	64	90	.....	11	9	.....
Wagons, 1918.....	6.3	2.0	41	54	.....	29	26	.....
Wagons, 1906.....	7.0	1.8	40	48	.....	16	18	.....
North Central, west:								
Motor trucks, 1918.....	10.1	3.8	54	84	.....	18	14	.....
Wagons, 1918.....	7.9	1.5	42	57	.....	33	29	.....
Wagons, 1906.....	8.7	1.4	39	52	.....	17	16	.....
South Central, east:								
Motor trucks, 1918.....	12.9	3.2	58	86	7.6	12	10	13
Wagons, 1918.....	10.4	1.0	26	38	3.2	45	36	52
Wagons, 1906.....	11.1	1.0	29	37	3.0	24	23	31
South Central, west:								
Motor trucks, 1918.....	13.0	2.9	57	72	6.7	17	15	20
Wagons, 1918.....	10.9	1.0	26	46	3.8	49	32	47
Wagons, 1906.....	12.6	.9	29	38	3.8	22	21	26
Rocky Mountain:								
Motor trucks, 1918.....	21.0	1.2	48	70	.....	36	29	.....
Wagons, 1918.....	20.2	.4	46	66	.....	52	42	.....
Wagons, 1906.....	16.8	.7	49	60	.....	16	20	.....
Pacific:								
Motor trucks, 1918.....	12.3	2.9	74	105	.....	20	17	.....
Wagons, 1918.....	11.2	1.4	71	67	.....	23	22	.....
Wagons, 1906.....	11.5	1.1	45	76	.....	28	21	.....

¹ Not shelled.

² The geographic divisions are—New England: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut; Middle Atlantic: New York, New Jersey, Pennsylvania; South Atlantic: Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida; North Central east of the Mississippi River: Ohio, Indiana, Illinois, Michigan, Wisconsin; North Central west of the Mississippi River: Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas; South Central east of the Mississippi River: Kentucky, Tennessee, Alabama, Mississippi; South Central west of the Mississippi River: Louisiana, Texas, Oklahoma, Arkansas; Rocky Mountain: Montana, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Idaho; Pacific: Washington, Oregon, California.

NATIONAL FORESTS.

TABLE 423.—*Area of National Forest lands, June 30, 1921.*

[Reported by the Forest Service.]

State.	Net area.	State.	Net area.	State.	Net area.
	<i>Acres.</i>		<i>Acres.</i>		<i>Acres.</i>
Alabama.....	65,167	Michigan.....	89,466	Porto Rico.....	12,443
Alaska.....	20,579,336	Minnesota.....	1,047,620	South Carolina.....	18,454
Arizona.....	11,355,846	Montana.....	15,917,132	South Dakota.....	1,076,754
Arkansas.....	926,985	Nebraska.....	205,944	Tennessee.....	213,425
California.....	19,172,982	Nevada.....	4,945,550	Utah.....	7,421,191
Colorado.....	13,290,354	New Hampshire.....	383,111	Virginia.....	350,362
Florida.....	317,511	New Mexico.....	8,382,683	Washington.....	9,939,712
Georgia.....	134,095	North Carolina.....	313,075	West Virginia.....	99,109
Idaho.....	18,712,241	Oklahoma.....	61,480	Wyoming.....	8,468,793
Maine.....	32,143	Oregon.....	13,133,081	Total, 149 Na- tional Forests	156,666,045

TABLE 424.—*National Forests: Timber disposed of, quantity, price, and number of users, revenue under specified heads, and details of grazing privileges, years ended June 30, 1916 to 1921.*

[Reported by the Forest Service.]

Item.	Year ending June 30—				
	1917	1918	1919	1920	1921
Free timber given:					
Number of users.....	41,427	33,073	34,617	37,336	.....
Timber cut..... M ft.	113,073	98,376	90,798	88,060	.....
Value..... dollars..	149,802	128,866	113,117	113,000	.....
Timber sales:					
Number.....	11,608	13,037	12,592	13,272	12,570
Quantity..... M ft.	2,008,087	1,453,299	799,476	1,326,922	1,170,186
Price per thousand board feet (average)..... dollars..	1.85	2.28	2.30	2.30	2.74
Grazing:					
Number of permits.....	36,638	39,113	39,152	37,500	38,153
Kinds of stock—					
Cattle..... number..	1,953,198	2,137,854	2,135,527	2,063,800	2,056,644
Goats..... do.....	49,939	57,968	60,789	53,685	43,190
Hogs..... do.....	2,306	3,371	5,154	4,068	3,177
Horses..... do.....	98,880	102,156	93,251	83,015	79,091
Sheep..... do.....	7,586,034	8,454,240	7,935,174	7,271,136	7,412,412
Total..... do.....	9,690,357	10,755,589	10,229,895	9,445,702	9,594,514
Special use and water-power permits, number..	6,056	5,819	5,191	6,026	.....
Revenue from—					
Timber sales..... dollars..	1,595,873	1,519,867	1,503,367	1,999,668	1,694,737
Timber settlements..... do.....	17,102	99,502	8,939	11,835	15,282
Timber trespass..... do.....	18,870	2,330	8,623	13,787	50,367
Turpentine sales..... do.....	8,156	8,334	13,220	19,310	8,978
Turpentine trespass..... do.....	.....	.....	692	.....	579
Fire trespass..... do.....	52,514	3,618	5,259	22,796	5,958
Occupancy trespass..... do.....	.....	1,207	689	943	539
Special uses..... do.....	108,329	119,979	136,134	149,265	* 158,346
Grazing fees..... do.....	1,544,714	* 1,702,585	2,556,962	2,427,028	439,983
Grazing trespass..... do.....	5,081	23,532	52,208	59,012	45,091
Water power..... do.....	106,389	93,976	72,322	89,838	85,070
Total revenue..... do.....	3,457,028	3,574,930	4,358,415	4,793,482	2,504,935

* Includes timber taken in the exercise of permits for rights of way, development of power, etc.

* Includes \$296 from sale of live stock.

* Includes \$50 property trespass.

COLD STORAGE SPACE.

TABLE 425.—Total refrigerated space of packing houses and cold storages reporting to the Bureau of Markets and Crop Estimates October 1, 1921.

[Thousands of cubic feet, i. e., 000 omitted.]

States	Concerns.	Cubic feet of space held at temperatures of—				Total space.
		10° and below.	11° to 29° inclusive.	30° to 44° inclusive.	45° and above.	
Alabama.....	6	11	119	954	25	1,109
California.....	63	894	1,870	12,276	138	15,198
Colorado.....	18	437	710	3,906	498	5,551
Connecticut.....	6	250	318	913	.....	1,481
District of Columbia.....	3	150	150	1,802	.....	2,102
Georgia.....	17	55	352	2,004	13	2,424
Illinois.....	94	24,277	13,523	81,001	8,825	127,626
Indiana.....	45	512	857	11,429	695	13,493
Iowa.....	43	1,192	2,488	17,384	1,482	22,546
Kansas.....	34	1,572	3,501	30,179	4,806	40,058
Kentucky.....	17	362	184	3,629	349	4,524
Louisiana.....	7	100	7	1,667	30	1,804
Maine.....	11	473	422	847	3	1,745
Maryland.....	21	408	183	3,355	586	4,532
Massachusetts.....	48	7,601	2,146	14,131	719	24,687
Michigan.....	28	574	569	4,771	289	6,203
Minnesota.....	23	2,264	2,309	12,084	1,630	18,266
Missouri.....	51	1,986	2,103	22,024	616	26,729
Nebraska.....	25	3,211	895	20,306	2,126	26,598
New Jersey.....	33	3,360	1,440	8,151	362	13,313
New York.....	171	9,554	8,228	48,226	1,642	67,650
Ohio.....	92	1,992	1,206	16,803	438	20,529
Oklahoma.....	13	489	1,649	4,800	1,020	7,958
Oregon.....	28	244	824	2,197	180	3,445
Pennsylvania.....	102	1,790	2,037	15,264	425	19,516
Rhode Island.....	5	530	250	768	154	1,702
South Dakota.....	8	86	127	1,424	53	1,690
Tennessee.....	15	390	47	3,208	5	3,740
Texas.....	45	453	1,635	9,090	1,488	12,766
Utah.....	6	113	55	1,048	.....	1,216
Virginia.....	28	271	835	7,281	170	8,557
Washington.....	46	856	2,270	9,002	1,701	13,839
West Virginia.....	14	7	6	2,603	2,136	4,752
Wisconsin.....	69	437	854	10,175	340	11,806
All other States.....	67	255	1,023	3,082	128	4,488
Totals.....	1,302	67,246	55,192	388,034	33,101	543,573
Public cold storage.....	341	42,673	20,963	125,547	4,515	193,778
Private cold storage.....	279	2,187	4,489	10,023	957	17,676
Combined public and private cold storage.....	219	4,951	5,751	27,600	1,096	39,398
Packing house.....	437	15,415	18,173	108,116	24,765	253,469
Packing house doing public cold storage.....	26	2,020	5,816	26,748	1,658	36,242
Total refrigerated space.....	1,302	67,246	55,192	388,034	33,101	543,573

GRAIN STORAGE CAPACITY.

TABLE 426.—Grain storage capacity of the United States,¹ as shown by the analysis of the license reports of May 15, 1918.

[Capacity shown in thousands of bushels; i. e., 000 omitted.]

State.	Country elevators.				Terminal elevators.		Mills.		Total capacity, elevators and mills.
	Number.	Capacity.	Number capacity not given.	Estimated capacity.	Number.	Capacity.	Number.	Storage capacity.	
		1,000 bushels.		1,000 bushels.		1,000 bushels.		1,000 bushels.	1,000 bushels.
Alabama.....	33	426	12	670	2	250	29	147	1,493
Arizona.....	7	125	2	175			6	450	750
Arkansas.....	26	683	4	508	8	699	95	693	2,583
California.....	328	8,849	123	22,268	12		71	3,763	34,880
Colorado.....	227	3,892	16	4,187	7	385	70	3,787	12,251
Connecticut.....	30	429	3	477			4		906
Delaware.....	7	22	2	31			47	135	183
District of Columbia.....					7	110			110
Florida.....	15	422	1	452					874
Georgia.....	22	278	4	800			101	536	1,614
Idaho.....	303	9,904	68	12,769			63	3,603	26,276
Illinois.....	2,031	73,755	19	74,716	31	36,670	222	7,610	192,751
Indiana.....	885	23,641	21	24,215	15	3,296	263	6,576	57,728
Iowa.....	1,668	36,890	40	37,275	3	405	121	2,419	76,929
Kansas.....	1,765	28,876	35	29,460	5	10,370	211	14,794	83,500
Kentucky.....	75	2,259	7	2,493	9	1,158	336	3,973	9,883
Louisiana.....	31	13,553	3	340	8	7,614	4	5	21,512
Maine.....	35	474	10	609	2	2,500	11	39	3,622
Maryland.....	82	2,591	6	2,801	4	6,000	159	783	12,175
Massachusetts.....	87	2,306	9	2,129	3	2,500	10	33	6,968
Michigan.....	717	8,522	30	8,872	20	11,802	314	3,376	32,572
Minnesota.....	1,576	43,694	25	44,403	58	78,134	245	18,299	184,530
Mississippi.....	19	164	2	180			4	5	349
Missouri.....	808	13,935	42	11,918	21	14,350	444	9,971	50,174
Montana.....	656	16,636	23	17,240			63	2,278	36,154
Nebraska.....	1,341	29,011	17	28,734	17	10,665	202	3,872	72,282
Nevada.....	3	13	1	20			12	183	216
New Hampshire.....	13	130	1	140			3	47	317
New Jersey.....	66	1,066	17	1,435			48	158	2,659
New Mexico.....	24	185	3	211			37	236	632
New York.....	308	15,991	35	8,453	26	28,283	189	7,048	59,775
North Carolina.....	9	89	1	100			440	772	961
North Dakota.....	1,907	32,336	6	32,436			82	2,037	66,809
Ohio.....	978	18,416	32	19,039	41	7,620	529	13,229	58,304
Oklahoma.....	845	8,624	21	8,543			101	4,097	21,564
Oregon.....	280	10,655	78	14,769	11	8,843	103	2,807	37,074
Pennsylvania.....	339	9,515	62	8,544	5	4,390	682	4,049	26,498
Rhode Island.....	10	313	1	348			1		661
South Carolina.....	9	310	4	557			64	77	944
South Dakota.....	1,130	28,896	8	29,102	5	153	69	1,043	59,194
Tennessee.....	86	6,784	4	7,115	16	2,386	459	3,725	20,010
Texas.....	397	12,892	40	14,336	6	4,500	139	9,815	41,543
Utah.....	46	1,390	8	1,682			74	1,741	4,813
Vermont.....	20	350	7	543			5	200	1,123
Virginia.....	44	1,353	3	337	1	950	484	1,652	4,292
Washington.....	583	14,025	41	15,093	8	4,089	72	6,941	40,148
West Virginia.....	19	153	2	170			207	919	1,242
Wisconsin.....	664	27,878	43	29,811			194	1,251	58,940
Wyoming.....	35	396	6	478			23	406	1,280
Total.....	20,589	513,067	953	521,284	351	248,122	7,212	149,580	1,432,053

¹ Source: Compiled from Table 15 in "Grain and Flour Statistics During the War," United States Grain Corporation.

FARM IMPLEMENTS AND EQUIPMENT.

TABLE 427.—Farm equipment manufactured in United States in 1920.

GAS TRACTORS.

Description.	Number manufac- tured.	Total value (000 omitted).	Number sold in United States.	Number sold for export.
Size, belt horsepower (makers' rating):				
15 and less.....	11,044	\$4,571	8,711	1,007
16 to 22.....	147,746	119,521	119,371	22,461
23 to 32.....	37,934	49,751	29,558	4,963
33 and over.....	6,483	19,720	5,348	707
Total.....	203,207	193,563	162,988	29,143

STEAM TRACTION ENGINES.

All sizes.....	1,766	\$4,661	1,401	121
----------------	-------	---------	-------	-----

PLOWES AND LISTERS.

Horse-drawn moldboard plows:				
1 horse.....	370,979	\$2,532	298,653	81,442
Walking (2-horse and larger).....	346,331	5,707	302,425	77,833
Sulky (1-bottom).....	51,911	3,209	57,903	6,176
Sulky (2-bottom).....	48,601	4,590	40,074	15,547
Sulky (3-bottom and larger).....	2,437	335	2,021	339
Total.....	820,259	16,373	701,076	181,327
Two-way moldboard plows:				
Walking.....	41,127	414	21,472	12,965
Sulky.....	5,694	470	5,229	69
Total.....	46,821	884	26,701	13,034
Horse-drawn disk plows:				
1-disk.....	2,927	143	1,496	123
2-disk.....	11,112	911	9,485	969
3-disk and larger.....	2,392	258	1,962	282
Total.....	16,431	1,312	12,943	1,374
Tractor moldboard plows:				
1-bottom.....	4,569	405	3,297	600
2-bottom.....	87,059	8,908	75,527	9,382
3-bottom.....	44,509	7,211	38,056	9,172
4-bottom and larger.....	7,405	1,771	5,148	1,103
Total.....	143,542	18,295	122,028	20,257
Tractor disk plows:				
2-disk.....	12,327	1,626	10,116	1,299
3-disk.....	8,982	1,394	6,972	1,139
4-disk and larger.....	7,007	1,319	5,539	712
Total.....	28,316	4,339	22,627	3,150
Horse-drawn listers:				
1-bottom.....	35,551	869	37,190	359
2-bottom.....	3,232	343	2,501	.....
Total.....	38,783	1,212	39,691	359
Tractor-drawn listers, 2-bottom.....	3,305	314	2,219	.....
Plow stocks.....	264,121	493	288,694	1,576
Total.....		43,222	.....	.....

FARM IMPLEMENTS AND EQUIPMENT—Continued.

TABLE 427.—Farm equipment manufactured in United States in 1920—Continued.

TILLAGE IMPLEMENTS.

Description.	Number manufactured.	Total value (000 omitted).	Number sold in United States.	Number sold for export.
Harrows:				
1-horse spike and spring-tooth.....	68,782	\$447	69,500	2,137
Spike-tooth harrow, 2-horse and larger, complete.....	87,121	1,653	80,878	4,582
Spike-tooth harrow, sections ¹	160,529	1,796	160,425	13,961
Spring-tooth harrows, 2-horse and larger, complete.....	24,610	523	25,008	766
Spring-tooth harrow, sections ¹	92,601	1,473	48,416	27,224
Horse-drawn disk.....	164,586	7,159	151,198	11,894
Tractor-drawn disk.....	67,095	6,820	59,715	3,589
Other harrows.....	12,800	218	11,925	28
Weeders.....	6,962	95	7,234	.....
Smooth land rollers.....	1,715	66	1,779	.....
Soil pulverizers, corrugated rollers and packers.....	31,085	1,962	30,801	927
Other tillage machines.....	11,110	707	10,415	431
Total.....		22,919		.....

¹ Not reported by manufacturer as complete harrows.

PLANTING MACHINERY.

Corn planters:				
Hand.....	33,780	\$53	34,583	365
1-row.....	31,602	521	31,127	581
2-row.....	59,627	3,474	66,475	1,207
Total.....	125,009	4,048	132,185	2,153
Cotton planters, 1-row.....	35,056	393	37,917	.....
Combination corn and cotton planters:				
1-row.....	90,732	1,647	97,908	1,436
2-row.....	2,854	174	3,773	1,246
Total.....	93,586	1,821	101,681	2,682
Combined listers and drills:				
1-row.....	7,607	473	11,858	.....
2-row.....	1,332	189	1,312	29
Total.....	8,939	662	13,170	29
Potato planters, horsedrawn.....	8,471	667	8,367	107
Grain drills:				
Horse.....	100,637	10,973	107,182	9,734
Tractor.....	3,406	431	3,168	163
Total.....	104,043	11,404	110,350	9,897
Broadcast seeders:				
Wheel (horse-drawn).....	6,783	357	6,163	636
End-gate.....	14,961	246	14,928	.....
Hand (wheelbarrow and other).....	69,239	78	68,280	1,080
Total.....	90,983	681	89,371	1,716
Beet drills, horse-drawn.....	1,357	103	1,386	8
Transplanters, horse-drawn.....	4,804	318	4,426	230
Total planting machinery.....	472,248	20,097	498,853	16,822

CULTIVATING MACHINERY.

Cultivator (row crops):				
Motor.....	1,120	\$911	865	20
Horse-drawn (straddle row):				
1-row walking.....	57,379	1,793	62,329	765
1-row riding.....	121,637	5,645	152,644	787
2-row.....	74,827	4,272	90,427	2,444
1-horse, including shovel plows, etc.....	316,312	1,950	273,576	40,785
Beet cultivators.....	4,430	283	5,336	157
Other cultivators (horse-drawn).....	4,474	332	4,653	905
Total.....				

FARM IMPLEMENTS AND EQUIPMENT—Continued.

TABLE 427.—Farm equipment manufactured in United States in 1920—Continued.

HAYING MACHINERY.

Description.	Number manufactured.	Total value (000 omitted).	Number sold in United States.	Number sold for export.
Mowers.....	239,165	\$15,393	172,654	68,229
Sulky rakes.....	84,485	3,107	77,622	19,695
Side-delivery rakes.....	15,195	1,127	16,658	414
Sweep rakes.....	22,964	819	24,078	165
Tedders.....	5,992	347	4,803	1,981
Loaders.....	33,337	3,050	32,399	2,509
Stackers.....	10,129	825	9,628	318
Combined sweep rakes and stackers.....	279	35	270	.....
Total.....	411,556	24,703	338,112	94,011

HARVESTING MACHINERY.

Grain binders.....	139,372	\$24,593	99,546	25,122
Grain headers.....	4,725	1,235	3,071	945
Combined harvesters and threshers.....	3,627	4,253	2,717	929
Rice binders.....	2,135	446	3,662	42
Corn binders (row).....	40,793	6,690	32,559	833
Self-rake reapers.....	14,949	1,170	1,708	12,377
Corn-pickers and huskers (field).....	2,882	1,068	2,939	.....
Potato diggers (elevator type).....	11,718	1,090	10,463	657
Potato diggers (plow type).....	6,452	93	6,781	228
Bean harvesters.....	498	31	490	.....
Beet lifters.....	5,056	250	4,893	201
Total.....	232,177	41,015	168,829	41,334

MACHINES FOR PREPARING CROPS FOR MARKET OR USE.

Grain threshers.....	22,159	\$19,059	20,753	1,961
Rice threshers.....	510	501	506	6
Pea and bean threshers.....	216	156	211	4
Clover hullers.....	690	910	767	102
Ensilage cutters.....	27,004	4,852	23,896	1,085
Corn shellers (power):				
Spring.....	6,379	1,133	5,549	125
Cylinder.....	850	511	957	25
Corn huskers and shredders.....	4,953	2,116	5,101	22
Hay presses:				
Horse.....	2,225	781	2,795	483
Engine.....	5,247	2,539	4,251	329
Feed grinders and crushers:				
Hand.....	44,797	226	23,535	20,346
Power.....	61,977	2,244	52,314	4,570
Grain cleaners and graders ¹	19,765	581	19,193	1,162
Total.....	196,772	35,612	159,918	30,220

¹ Not including seed-corn graders.

HORSE-DRAWN VEHICLES.

Farm wagons:				
1-horse.....	32,934	\$2,076	31,165	122
Light 2-horse, 3,500 pounds loaded.....	49,498	5,413	46,571	32
Medium 2-horse, 4,500 pounds loaded.....	72,399	8,325	68,439	43
Standard 2-horse, 6,500 pounds loaded.....	50,926	6,457	48,380	67
Heavy 2-horse, 7,500 pounds loaded.....	9,666	1,384	9,317	213
Sizes not specified.....	11,800	1,140	11,800	.....
Horse-drawn farm trucks with wood wheels.....	47,238	3,280	44,757	725
Horse-drawn farm trucks with metal wheels.....	36,856	1,617	34,607	471
Light spring vehicles.....	5,532	477	3,409	2,137
Buggies.....	132,246	12,254	132,014	.....
Total.....	449,095	42,423	430,459	3,810

FARM IMPLEMENTS AND EQUIPMENT—Continued.

TABLE 427.—*Farm equipment manufactured in United States in 1920—Continued.*

MISCELLANEOUS ITEMS.

Description.	Number manufac- tured.	Total value (000 omitted).	Number sold in United States.	Number sold for export.
Cane mills.....	11,923	\$780	7,539	1,879
Cream separators, centrifugal.....	222,587	15,501	169,057	27,954
Farm elevators:				
Portable.....	7,703	1,776	7,423	69
Stationery.....	3,052	924	2,910	8
Feed and litter carriers.....	15,093	682	14,274	75
Fertilizer distributors (horse-drawn).....	48,540	453	51,236	.....
Gasoline and kerosene engines (stationery and portable) for farm use.....	268,287	25,693	216,144	22,059
Lime spreaders.....	9,153	325	9,093	83
Manure spreaders.....	103,036	14,744	104,444	1,120
Milking machines.....	29,555	2,962	28,130	921
Portable corn cribs.....	4,502	731	4,186	.....
Portable grain bins.....	6,137	1,206	6,137	.....
Pumps ¹	500,690	5,087	445,269	27,177
Pump jacks.....	84,948	877	86,198	2,349
Seed-potato cutters.....	1,442	14	1,418	.....
Silos ¹	24,052	9,492	23,637	24
Spraying machines (power or traction).....	11,000	2,488	10,715	228
Stalk cutters.....	24,064	1,098	22,455	43
Stump pullers:				
Hand.....	3,216	310	2,113	1,008
Horse or engine.....	1,646	308	775	241
Syrup evaporators.....	11,355	275	9,114	233
Wind mills.....	75,736	5,443	57,108	17,464
Wood sawing machines:				
Circular.....	29,084	732	29,195	36
Drag.....	11,482	1,633	10,427	13
Total.....	1,508,283	93,544	1,318,997	102,984

¹ Not complete.

RECAPITULATION OF MANUFACTURE AND SALE OF FARM EQUIPMENT IN 1920.

Tractors, gas.....	203,207	\$193,563	162,988	29,143
Steam traction engines.....	1,766	4,661	1,401	121
Plows and listers.....	1,361,578	43,222	1,215,979	221,077
Tillage implements.....		22,919	.....	.....
Planting machinery.....	472,248	20,097	498,853	16,822
Cultivating machinery.....	580,179	15,186	589,890	45,863
Haying machinery.....	411,556	24,703	333,112	94,011
Harvesting machinery.....	232,177	41,015	168,829	41,334
Machines for preparing crops for market or use.....	196,772	35,612	159,918	30,220
Horse-drawn vehicles.....	449,095	42,423	430,459	3,810
Miscellaneous items.....		93,544	.....	.....
Grand total.....	3,908,578	536,945	3,566,369	482,401

VEGETABLE OILS.

TABLE 428.—Imports of vegetable oils into the United States, for calendar years specified.

[Source: Bureau of Foreign and Domestic Commerce.]

Oils.	1912	1914	1916	1917	1918	1919	1920	1921 ¹
	1000 pounds.	1000 pounds.	1000 pounds.	1000 pounds.	1000 pounds.	1000 pounds.	1000 pounds.	1000 pounds.
Castor ²	56	1,661	3,071	4,406	8,780	3,000	1,372	148
Chinese nut.....	42,787	30,137	57,649	41,091	42,718	53,853	67,962	27,249
Cocoa butter or but- terine.....	4,749	1,244	558	1	3	1	72	2,373
Coconut.....	46,720	58,012	64,349	163,091	356,089	281,063	216,327	189,717
Cottonseed.....	2,160	16,017	16,598	13,826	18,373	27,806	9,458	669
Linseed.....	2,134	4,350	711	633	196	16,143	35,200	60,091
Olive ³	49,154	56,466	61,769	55,531	1,286	69,799	31,087	53,881
Palm.....	52,771	49,092	29,270	34,257	20,993	41,818	41,948	23,155
Palm kernel.....	27,681	21,089	4,324	(⁴)	34	1,929	1,694	2,383
Peanut.....	7,626	7,365	15,674	27,405	68,466	154,052	95,124	3,621
Rapeseed.....	10,266	11,172	20,181	10,132	23,079	8,375	12,907	7,152
Soy bean.....	24,959	12,555	145,409	264,926	335,984	195,808	112,214	17,283

¹ Preliminary.³ Includes oil for mechanical purposes.² Imports for consumption.⁴ Less than 1,000 pounds.

NOTE.—Conversions on basis of 7½ pounds to the gallon for all oils except castor; castor oil, 8 pounds to the gallon.

TABLE 429.—Domestic exports of vegetable oil from the United States, for specified calendar years.

[Source: Bureau of Foreign and Domestic Commerce.]

Oils.	1912	1914	1916	1917	1918	1919	1920	1921 ¹
	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.
Corn.....	22,870	16,199	9,119	4,709	171	6,415	12,059	4,400
Cottonseed.....	355,930	216,309	188,214	124,704	119,067	193,133	184,754	252,592
Linseed.....	3,151	1,993	6,180	11,465	5,806	11,266	5,366	3,512
Cocoa butter or but- terine ²						³ 7,320	5,377	2,855
Coconut ²						³ 118,612	25,694	7,498
Peanut ²						³ 4,342	1,425	1,708
Soy bean ²						³ 27,715	43,512	1,944

¹ Preliminary.² Not separately stated prior to July 1, 1919.³ July to December.

NOTE.—Conversions on basis of 7½ pounds to the gallon.

TABLE 430.—Production of vegetable oils in the United States, for calendar years specified.

[Sources: 1912-1918, Supplement to Bulletin 769, U. S. Dept. of Agriculture; 1919-1921, Animal and Vegetable Fats and Oils, Bureau of Census (Bulletin.)]

Oils.	1912	1914	1916	1917	1918	1919	1920	1921 ¹
	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.	1,000 pounds.
Castor.....	23,359	20,423	22,766	22,902	14,184	24,637	24,187	20,595
Coconut ²	31,729	38,272	104,727	188,488	341,235	215,542	131,218	113,194
Corn ²	72,832	91,810	109,963	118,021	111,065	97,400	98,619	87,481
Cottonseed ³	1,435,401	1,789,777	1,492,430	1,343,849	1,283,823	1,429,948	1,142,671	1,277,030
Linseed.....	461,656	507,422	531,586	482,199	375,452	452,928	485,272	482,918
Mustard seed.....	360	406	729	1,098	1,206	(⁴)	(⁴)	(⁴)
Olive.....	366	1,128	1,462	963	618	439	643	974
Palm kernel ²	3,200	402	8,619	6,453	3,784	2,517	2,671	1,327
Peanut ²	454	1,006	28,534	50,499	95,934	87,607	13,085	33,234
Raisin seed.....	320	435	752	667	586	(⁴)	(⁴)	(⁴)
Rapeseed.....	90	19	223	232	139	1,237	409	128
Sesame.....		30	129	304	299	(⁴)	(⁴)	(⁴)
Sheanut.....			3,974	81		(⁴)	(⁴)	(⁴)
Soy bean.....		2,764	9,920	42,074	79,861	(⁴)	(⁴)	(⁴)

¹ Preliminary.

Edible and inedible from 1912-1918. Crude 1919-1921.

³ Crude oil only.⁴ Data unavailable.

TABLE 431.—*International trade in cottonseed oil.*

[Conversions on the basis of 7.5 pounds to the gallon.]

Countries.	1913		1917		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Belgium.....	15,030,115	7,533,416	(1)	(1)	(1)	(1)	3,346,722	2,391,067	3,108,517	1,192,525
Denmark.....	8,011,875	2,035,728	14,274,564	109,569	3,593,498	42,108	9,595,301	89,286	6,985,368	(1)
France.....	19,534,299	3,307	532,031	(1)	33,069	(1)	10,381,241	319,067	30,215,586	(1)
Italy.....	29,680,309	229,426	18,807,484	(1)	760,675	(1)	8,211,033	48,778,168	19,514,235	3,748
Netherlands.....	58,238,453	473,526	27,433,028	(1)	14,991	(1)	43,778,168	11,877,699	21,150,952	5,482,885
Norway.....	11,353,700	21,385	5,267,961	30,953	38,671,360	114,240	11,877,699	9,653,461	(1)	(1)
Rumania.....	5,610,685	57,198,400	19,122,880	4,867,520	43,691,923	(1)	9,653,461	57,211,840	(1)	(1)
Sweden.....	37,152,610	38,253,441	38,253,441	(1)	18,372,867	(1)	57,211,840	52,086,202	16,470,720	38,906,560
United Kingdom.....	27,202,614	13,626,028	13,626,028	124,703,506	9,948,780	119,067,376	52,086,202	103,131,201	(1)	(1)
Canada (year beginning April 1).....	11,405,831	264,778,781	9,428,963	4,511	2,660,566	4,584,468	27,866,781	10,601	9,457,924	184,753,824
United States.....	4,140,270	4,719,857	364,740	2,503,797	51,910	4,938,313	2,294,078	4,918,313	(1)	(1)
Cuba.....	13,011,958	253,328	(1)	4,741,579	(1)	3,761,101	1,504,856	25,724,067	(1)	(1)
Argentina.....	3,300,873	8,864,533	(1)	10,406,800	(1)	3,081,067	81,301	3,081,067	(1)	(1)
Brazil.....	(1)	1,133,608	(1)	1,612,800	(1)	(1)	(1)	(1)	(1)	(1)
China.....	41,308,747	1,639,759	1,639,759	4,863,352	831,907	951,516	(1)	1,073,903	286,992	(1)
Peru.....	4,085,816	4,642,087	(1)	(1)	32,714	(1)	1,073,903	259,670	226,449	(1)
Japan.....	884,318	(1)	(1)	(1)	(1)	(1)	30,868	443,588	(1)	(1)
Australia (year ending June 30).....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Union of South Africa.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Egypt.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)

¹ Data unavailable.² Commerce Reports.³ Not separately stated.⁴ Calendar year.

Norw.—Except as otherwise indicated, sources for the above data may be noted as follows:
 Belgium: Bulletin Mensuel du Commerce Special de la Belgique avec les Pays Etrangers.
 Denmark: Danmarks Vareindførsel og Udførsel. Also, Vareomsættningen med Udlandet (Danmark).
 France: Tableau Général du Commerce et de la Navigation, Vol. I. Also, Documents Statistiques sur le Commerce de la France.
 Italy: Movimento Commerciale del Regno d'Italia.
 Netherlands: Statistiek van den In- en Doorvoer Nederlanden. Also, Maandstatistiek.
 Norway: Norges Handel.
 Rumania: Bulletin Semestriel de la Statistique.
 Sweden: Sveriges Officiella Statistisk-Handel.

United Kingdom: Accounts Relating to Trade and Navigation of the United Kingdom.
 Canada: Monthly Report of the Trade of Canada.
 United States: Commerce and Navigation of the United States
 Cuba: Comercio Exterior, Republica de Cuba.
 Argentina: Anuario de la Direccion General de Estadistica.
 Brazil: Comercio Exterior do Brasil.
 Peru: Estadística del Comercio Especial del Perú.
 Japan: Annual Return of Foreign Trade—Japan.
 Australia: Trade Customs and Excise Revenue of the Commonwealth of Australia.
 Egypt: Monthly Summary of the Foreign Trade of Egypt (December).
 China: Returns of Trade and Trade Reports, Part I.
 Union of South Africa: Annual Statement of the Trade and Shipping of the Union of South Africa.

TABLE 432.—*International trade in olive oil (including nonedible).*
[Conversions on basis of 7.5 pounds to the gallon.]

Countries.	1913		1917		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
Belgium.....	Pounds. 4,438,263	Pounds. 940,535	Pounds. (1)	Pounds. (1)	Pounds. (1)	Pounds. (1)	Pounds. 5,810,237	Pounds. 2,447,419	Pounds. 1,273,035	Pounds. 293,365
Denmark.....	17,637	8,307	25,353	3,307	3,307	582	2,56,231	2,5,388,704	(1)	(1)
Finland.....	243,659	114,282	114,282	3,594,821	27,060,014	981,929	121,605,075	(1)	(1)	(1)
France.....	31,926,797	13,027,202	114,089,769	11,827,442	2,717,222	2,717,222	15,175,805	18,888,792	2,630,970	23,374,272
Greece.....	11,827,442	11,827,442	2,50,083	12,186,318	3,487,456	1,155,431	833,487	396,403	36,761	36,162
Italy.....	68,824,526	277,028	22,890,820	18,522,387	1,056	46	2,351,109	(1)	2,227,135	(1)
Netherlands.....	4,601,882	83,601	3,893,010	2,770,944	1,025,672	56,647	5,453,484	7,692	(1)	(1)
Norway.....	2,408,415	83,601	3,893,010	(1)	(1)	351	8,225	247,514,573	(1)	(1)
Portugal.....	30,886	4,226,495	64,447	(1)	(1)	450,167	8,225	480,053	(1)	(1)
Rumania.....	7,310,094	884	1,955	179,930,523	2,808,661	85,538,244	14,015,680	15,873	(1)	(1)
Spain.....	731,152	622	88,781	221,760	183,907	2,240	1,821,173	154,560	9,739,520	(1)
Sweden.....	3,256,856	20,944	4,308,279	(1)	(1)	351	69,799,425	(1)	31,087,200	(1)
Switzerland.....	20,280,800	725,760	10,530,210	221,760	2,808,661	85,538,244	1,152,508	(1)	(1)	(1)
United Kingdom.....	1,679,833	1,621,252	1,621,252	10,337,600	10,337,600	2,240	14,015,680	(1)	(1)	(1)
Canada (year beginning April 1).....	43,072,635	55,530,712	55,530,712	1,289,385	7,498,088	3,784,808	29,825,857	(1)	(1)	(1)
United States.....	62,717,198	7,940,343	29,919,326	1,419,555	1,419,555	3,065,794	(1)	(1)	(1)	(1)
Cuba.....	8,681,907	(1)	(1)	(1)	(1)	(1)	467,991	(1)	(1)	(1)
Argentina.....	7,940,343	(1)	(1)	(1)	(1)	(1)	269,067	(1)	(1)	(1)
Brazil.....	6,378,900	30,770	406,747	20,953	141,733	1,836	241,578	(1)	(1)	(1)
Chile.....	793,178	197,040	119,067	141,733	132,675	1,836	241,578	(1)	(1)	(1)
Japan.....	3,533,122	522,941	522,941	1,269	102,630	2,530	1,908,450	(1)	(1)	(1)
Australia (year ending June 30).....	55,246	33,272	33,272	1,269	102,630	2,530	1,908,450	(1)	(1)	(1)
New Zealand.....	273,781	292,212	292,212	2,530	102,630	2,530	1,908,450	(1)	(1)	(1)
Philippine Islands.....	3,021,181	95,980	95,980	2,530	102,630	2,530	1,908,450	(1)	(1)	(1)
French Africa.....	4,080,829	4,215,152	4,215,152	2,530	102,630	2,530	1,908,450	(1)	(1)	(1)
Egypt.....										

¹ Data unavailable.

NOTE.—Except as otherwise indicated, sources for the above data may be noted as follows:
 Belgium: Bulletin Mensuel du Commerce Spécial de la Belgique avec les Pays Étrangers.
 Denmark: Danmarks Vareindførsel og Udførsel. Also, Væremængdetningen med Udlandt (Denmark).
 Finland: Handels Finland.
 France: Tableau Général du Commerce et de la Navigation, Vol. I. Also, Documents Statistiques sur le Commerce de la France.
 Greece: Bulletin Mensuel du Commerce Spécial de la Grèce.
 Italy: Movimento Commerciale del Regno d'Italia.
 Netherlands: Statistiek van den In- en uit- en Doervoer Nederlanden. Also, Maandstatistiek.
 Norway: Norges Handel.
 Portugal: Estatística do Comércio e Navegação Republica Portuguesa.
 Rumania: Bulletin Semestriel de la Statistica Commerciale (Fascicule II).
 Spain: Estadística del Comercio Exterior de España.
 Sweden: Sveriges Officiella Statistik-Handel.

² Commerce Reports.
 Switzerland: Statistique du Commerce de la Suisse avec l'Étranger.
 United Kingdom: Accounts Relating to Trade and Navigation of the United Kingdom.
 Canada: Monthly Report of the Trade of Canada.
 United States: Commerce and Navigation of the United States.
 Cuba: Comercio Exterior, Republica de Cuba.
 Argentina: Anuario de la Dirección General de Estadística.
 Brazil: Comercio Exterior do Brasil.
 Chile: Estadística Comercial de la Republica de la Chile.
 Peru: Estadística del Comercio Especial del Perú.
 Japan: Annual Return of Foreign Trade—Japan.
 Australia: Trade Customs and Excise Revenue of the Commonwealth of Australia.
 New Zealand: Trade and Interchange, Vol. II.
 Philippine Islands: Annual Report of the Bureau of Customs and Foreign Commerce of the Philippine Islands.
 Egypt: Monthly Summary of the Foreign Trade of Egypt (December).

TABLE 433.—*International trade in peanut oil.*

[Conversions on basis of 7.5 pounds to the gallon.]

Countries.	1913		1917		1918		1919		1920	
	Imports.	Exports. *	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
Belgium.....	Pounds. 3,332,595	Pounds. 1,946,300	Pounds. (¹)	Pounds. (¹)	Pounds. (¹)	Pounds. (¹)	Pounds. 2,506,727	Pounds. 315,778	Pounds. 2,539,106	Pounds. 1,703,164
Denmark.....	4,471,811	53,427,379	(¹)	(¹)	(¹)	(¹)	1,089,203	2,439,720	998,681	.....
France.....	7,631,003	220	4,535,230	11,674,018	2,301,382	3,755,536	7,629,460	2,439,720	.....	.....
Italy.....	6,534,915	21,415,747	7,969,547	978,935	2,040,889	48,395	7,789,036	5,641,743	12,253,387	53,351
Netherlands.....	.....	.....	.....	.....	186,245	.....	5,422,928	.....	2,260,768	8,702,683
Norway.....	.....	18,435	.....	99	.....	79	.....	1,633,102	.....	.....
Spain.....	3,123,601	.....	.....	.....	68,466,450	.....	2,243,529	2,661	.....	.....
Sweden.....	11,271,098	.....	27,404,535	.....	.....	.....	154,032,378	2,431,803	95,124,278	1,425,225
United States.....	(¹)	34,209,783	(¹)	61,807,067	(¹)	78,750,267	(¹)	163,223,067	.....	.....
China.....	.....	.....	.....	.....	2,13,669,333	2,12,703,333	2,9,132,533	2,22,066,400	.....	.....
Hongkong.....	.....	.....	.....	.....	.....	337,965	.....	996,479	.....	.....
Indo-China.....	2,146,727	2,315,011	.....	.....	1,007,094	.....	1,176,901	.....	.....	.....
Philippine Islands.....	1,381,117	.....	1,252,661	.....	.....	.....	560,493	.....	16,878	.....
Egypt.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

* Data unavailable.

* Commerce Reports.

* July 1 to December 31

* Not separately stated.

TABLE 434.—*International trade in linseed oil.*

[Conversions made on the basis of 7.5 pounds to the gallon.]

Countries.	1913		1917		1918		1919		1920	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
Belgium.....	Pounds. 18,105,419	Pounds. 15,827,807	Pounds. (1) 470,775	Pounds. (1) 4,920,006	Pounds. (1) 48,671	Pounds. (1) 1,139,999	Pounds. 20,271,248	Pounds. 10,667,131	Pounds. 4,131,826	Pounds. 16,117,085
Finland.....	850,636	(4) 5,783,327	29,531,058	(3) 4,920,006	5,009,072	(2) 1,139,999	4,238,130	(2) 3,321,223		
France.....	4,071,768		136,797		157,484		46,096,636			
Greece.....	131,833		166,067		288,741		8,337,136			
Italy.....	985,236		5,890,470		2,789,921		2,631,990			
Netherlands.....	1,214,975		5,172		33,336		38,170,215			
Norway.....	3,227,623		4,092,664		157,939		8,828,746			
Rumania.....	85,750				157,563		12,531			
Sweden.....	792,688		628,337		(1) 1,825		6,948,061			
Switzerland.....	10,513,958		4,986,805		2,663,157		5,381,208			
United Kingdom.....	29,020,120		67,000,640		2,663,157		703,929			
Canada (Year beginning Apr. 1)	293,512		382,015		3,926,720		168,004,480			
United States.....	1,213,200		633,022		(4) 5,806,440		4,836,108			
Argentina.....	1,139,231		300,644		195,968		16,142,835			
Brazil.....	10,687,982		6,029,156		36,808		256,066			
Chile.....			1,707,740		4,186,315		5,732,703			
Peru.....	1,003,369		568,068		793,603					
British India.....	3,837,181		895,715		580,087		655,849			
Dutch East Indies.....	3,104,491		3,307,338		47,397		683,100			
Japan.....	3,582,269		148,267		2,044,751		2,267,137			
Australia (Year ending June 30)			3,088,672		1,193,491		375,467			
New Zealand.....	4,963,409		4,321,647		1,193,491		369			
Philippine Islands.....	1,019,572		437,650		3,459,043		1,778,377			
Union of South Africa.....	3,792,462		1,963,695		3,721,754		1,970,980			
French Africa.....	266,498		138,998		3,132,293		252,925			
Egypt.....	3,540,224		1,038,808		1,157,274		1,282,608			

* Commerce Reports.

* Including imports for the New Zealand Government, as follows: 1917, 117 659 pounds; 1918, 275,802 pounds; 1919, 135,394 pounds.

1 No data available.

2 Not separately stated.

COST DATA FOR FARM PRODUCTS.

With the growing complexity of the farmer's economic problems has come an increasing demand for reliable information relative to the cost of producing various farm products. Investigators, teachers, and students, as well as farmers, are realizing more and more the necessity of basing the analysis of their problems on cost data.

In the past decade the United States Department of Agriculture, either directly or in cooperation with the State agricultural colleges, has gathered a considerable amount of information on farm costs. The results of most of these studies have already been published. Some of these investigations, however, were conducted chiefly for the purpose of obtaining information for miscellaneous office use, and consequently the results thereof have never been made available to the public.

To make readily available the essential facts brought out by these investigations, this information is here combined into summary tables, giving the labor and material requirements as well as the money cost per unit for all farm products for which data are available.

Unfortunately a great deal of experimental work had to be done at the beginning in trying out methods for obtaining the records from the farmer, as well as in posting and summarizing the results. For this reason some of the cost figures gathered in the earlier studies are not directly comparable, and can not be used properly in drawing comparisons between costs in different regions, nor in a comparison of variations in costs brought about by different farm practices. When it is desired to make direct comparisons between the costs quoted in the following tables *from two or more different sources*, the investigator is urged to refer to the original publications to see whether the particular factors which he wishes to compare have been handled according to the same principles.

In general it may be stated that all the live-stock figures are comparable, excepting those for dairy cows. In this latter table there are some variations, especially in the items that different investigators have included as overhead. The data on cost of tractors, motor trucks, sugar beets, beans, cotton, potatoes, tobacco, grain sorghums, and apples are also comparable for the various regions concerned.

It has been the object here to give all of the figures exactly as they appear in the original publications from which they are taken. In some instances, however, where the original tables give the various items of cost in great detail, it has been necessary to combine some of these in order to reduce the size of the tables. A few investigators have also included certain items that are usually left out of consideration, as, for example, estimated charges for cost of managment, interest on current operating expenses, and, for some crops, building charges. To gain the greatest uniformity in these tables these unusual items have been dropped in all cases in which the original tables present them separately.

COST OF TRACTOR WORK.¹

TABLE 435.—Average cost per acre of using 2-plow and 3-plow tractors for Alabama, Georgia, Tennessee, and North and South Carolina, with disk and moldboard plows for plowing in 1920.

Kind and size of plow pulled.	Number of records.	Depreciation	Repairs.	Interest.	Gasoline. ²	Kerosene. ²	Oil. ³	Total	
								For gasoline tractors.	For kerosene tractors.
2-plow, disk.....	412	\$0.53	\$0.16	\$0.18	\$1.14	\$0.78	\$0.17	\$2.18	\$1.82
2-plow, moldboard.....	108	.45	.13	.15	.95	.65	.16	1.84	1.54
2-plow, all.....		.51	.15	.17	1.07	.73	.17	2.07	1.73
3-plow, disk.....	107	.47	.15	.17	1.01	.69	.16	1.96	1.64
3-plow, moldboard.....	25	.46	.14	.16	.89	.62	.11	1.76	1.49
3-plow, all.....		.46	.15	.16	.98	.67	.15	1.90	1.59

¹ 30.7 cents per gallon.² 20.4 cents per gallon.³ 85.2 cents per gallon

NOTE.—Cost of fuel for kerosene-burning tractors includes gasoline for starting (average value \$0.02 per acre). Repairs computed on basis of an annual repair charge of 4 per cent of first cost of machine. Annual interest charge equaled 8 per cent of average investment.

TABLE 436.—Cost of power on tractor farms of different sizes (Ohio, Indiana, Illinois).

Size of farm (crop acres)	Number of farms.	Cost of keeping horses.	Cost of tractor for draw bar work.	Total cost of power.	Per cent tractor cost was of total cost
Less than 80.....	7	\$621	\$172	\$793	21.7
80 to 119.....	28	660	279	939	29.7
120 to 159.....	71	849	279	1,128	24.7
160 to 199.....	56	1,006	331	1,337	24.8
200 to 239.....	47	1,120	340	1,460	23.3
240 to 279.....	36	1,292	386	1,678	23.0
280 to 319.....	19	1,367	452	1,819	24.8
320 and over.....	22	1,966	576	2,542	22.6
All.....	286	1,076	341	1,417	24.1

TABLE 437.—Cost of power for different operations as furnished by horses and by tractors (Ohio, Indiana, Illinois).

[Cost per acre.]

Operation	1920				1921	
	Horses.	Tractors			Horses.	Tractors.
		2-plow.	3-plow.	All		
Spring plowing.....	\$2.89	\$2.01	\$2.15	\$2.07	\$1.53	\$1.70
Fall plowing.....	3.04	2.06	2.22	2.13	1.62	1.75
Disking.....	.64	.71	.59	.67	.34	.55
Disking in combination.....	.98	.71	.76	.72	.52	.59
Harrowing, rolling, etc.....	.34	.35	.49	.37	.18	.30
Drawing hay loader.....	.98	1.14	1.05	1.11	.52	.91
Drawing grain binder.....	.59	.64	.76	.67	.31	.55

NOTE.—The cost of man labor and of the implements used must be added to the cost of power to obtain the total cost of performing the different operations. The horse costs shown for 1921 are 53 per cent and the tractor costs 82 per cent of the 1920 costs.

¹ Table 435 taken from U. S. Dept. of Agriculture, Farmers' Bul. 1278. Tables 436-442 taken from U. S. Dept. of Agriculture Bul. 997.

COST OF TRACTOR WORK—Continued.

TABLE 438.—*Fuel and oil requirements per day and per acre of tractors for different operations (Ohio, Indiana, Illinois).*

2-PLOW TRACTORS.

Operation.	Number of tractors.	Requirements per day.		Requirements per acre.	
		Fuel.	Oil.	Fuel.	Oil.
		<i>Galls.</i>	<i>Galls.</i>	<i>Galls.</i>	<i>Galls.</i>
Spring plowing.....	164	17.97	1.10	2.71	0.17
Fall plowing.....	129	18.46	1.06	2.86	.16
Disking.....	95	17.98	1.03	.83	.05
Disking in combination.....	101	17.78	1.09	.90	.06
Harrowing, etc.....	53	16.23	1.61	.42	.03
Drawing hay loader.....	24	11.45	.85	1.09	.08
Drawing grain binder.....	101	14.50	.92	.73	.05

3-PLOW TRACTORS.

Spring plowing.....	94	23.12	1.29	2.68	0.15
Fall plowing.....	80	23.33	1.32	2.71	.15
Disking.....	46	22.02	1.34	.71	.04
Disking in combination.....	64	22.74	1.30	.95	.05
Harrowing, etc.....	7	21.60	1.51	.42	.03
Drawing hay loader.....	13	15.06	1.09	1.30	.09
Drawing grain binder.....	27	17.31	1.16	.75	.05

TABLE 439.—*Days of tractor work on farms of different sizes, 1920 (Ohio, Indiana, Illinois).*

Size of farm (crop acres).	Number of farms	Days of work on home farm.		Days of custom work.		Total days.
		Draw-bar.	Belt.	Draw-bar.	Belt.	
Less than 80.....	7	11.1	2.0	4.0	5.9	23.0
80 to 119.....	28	17.5	2.3	2.3	3.1	25.2
120 to 159.....	71	19.1	3.1	2.6	3.7	28.5
160 to 199.....	56	22.1	3.0	2.2	2.4	29.7
200 to 239.....	47	26.0	2.1	1.3	1.3	30.7
240 to 279.....	36	28.5	2.1	1.9	1.6	34.1
280 to 319.....	19	31.7	2.0	1.5	0.4	35.6
320 and over.....	22	32.6	3.9	1.0	4.3	41.8
All.....	286	23.5	2.7	2.0	2.6	30.8

TABLE 440.—*Average number of days per year 2-plow and 3-plow tractors were used for different drawbar operations and average number of acres covered per day, 1920 (Ohio, Indiana, Illinois).*

[174 two-plow tractors and 104 three-plow tractors.]

Operation.	2-plow.		3-plow.	
	Days per year.	Acres per day.	Days per year.	Acres per day.
Spring plowing.....	7.9	6.62	6.3	8.63
Fall plowing.....	5.1	6.46	5.2	8.62
Disking.....	4.0	21.60	2.3	30.78
Disking in combination.....	3.4	19.69	4.0	23.83
Harrowing, rolling, etc.....	1.1	39.05	.2	51.38
Drawing hay loader.....	.4	10.50	.4	11.57
Cutting grain.....	1.9	19.73	.9	23.22
Other work.....	2.0	.....	.....	.....
Total.....	25.8	.....	20.2	.....

COST OF TRACTOR WORK—Continued.

TABLE 441.—Proportion of different operations done with horses and with tractors, all farms (Ohio, Indiana, Illinois).

Operation.	Days of horse labor per farm.	Horse-day equivalent of tractor work.	Total.	Percentage done with tractors.
Plowing.....	18.9	109.2	128.1	85.2
Fitting ground after plowing.....	34.5	68.4	102.9	66.5
Seeding grain.....	11.8	11.8	11.8	.....
Planting corn.....	12.2	12.2	12.2	.....
Cultivating.....	80.4	80.4	80.4	.....
Haying.....	17.4	1.5	18.9	7.9
Cutting grain.....	10.7	7.4	18.1	40.9
Threshing.....	31.3	31.3	31.3	.....
Corn harvest.....	99.0	99.0	99.0	.....
Other fieldwork.....	4.4	7.9	12.3	.....
Hauling manure.....	43.8	43.8	43.8	.....
Other work on farm.....	49.1	49.1	49.1	.....
Road hauling.....	36.4	36.4	36.4	.....
Total.....	449.9	194.4	644.3	30.1

TABLE 442.—Number of tractors of different sizes on farms of different sizes (Ohio, Indiana, Illinois).

Size of farms (crop acres).	Number of farms.	1-plow tractor.	2-plow tractors.	3-plow tractors.	4-plow tractors.	5-plow tractor.
Less than 80	7	.....	5	2	.....	.....
80 to 119.....	28	1	22	5	.....	.....
120 to 159.....	71	.....	52	19	.....	.....
160 to 199.....	56	.....	29	26	1	.....
200 to 239.....	47	.....	27	18	2	.....
240 to 279.....	36	.....	18	18	.....	.....
280 to 319.....	19	.....	10	9	.....	.....
320 or more.....	22	.....	11	7	3	1
Total.....	286	1	174	104	6	1

COST OF MOTOR TRUCK WORK.¹

TABLE 443.—Cost of operating motor trucks of different sizes in Corn Belt (1920).

Item.	Size.			
	1-ton and $\frac{3}{4}$ -ton.	1-ton.	1 $\frac{1}{2}$ -ton and 1 $\frac{3}{4}$ -ton.	2-ton.
Fixed charges:				
Annual depreciation.....	\$245	\$158	\$239	\$288
Annual repairs.....	75	75	100	150
Annual interest.....	51	34	63	73
Annual registration and license fee.....	15	12	14	20
Total fixed charges.....	386	279	416	531
Miles traveled per year.....	3,928	2,630	2,570	2,837
Fixed charges per mile.....	\$0.098	\$0.106	\$0.162	\$0.187
Gasoline and oil per mile ².....	.021	.029	.030	.037
Tires per mile.....	.030	.017	.021	.034
Total cost per mile.....	.152	.152	.213	.258

¹ From U. S. Dept. of Agriculture Bul. 931.

² Gasoline 26 cents per gallon and oil 70 cents per gallon.

LABOR AND MATERIAL REQUIRED PER ACRE FOR DIFFERENT CROPS.

TABLE 444.—*Corn: Labor and material requirements per acre, exclusive of marketing (253 records)*¹

CORN-BELT AREAS (CORN HARVESTED FROM STANDING STALK).

Region.	Number of records.	Average yield per acre.	Man labor.			Horse labor.			Seed.	Ma-nure.	Ferti-lizer.	Twine.
			Prior to har-vest.	Har-vest.	Total.	Prior to har-vest.	Har-vest from stand-ing stalk.	Total.				
		<i>Bush.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Lbs.</i>	<i>Loads.</i>	<i>Lbs.</i>	<i>Lts.</i>
Kansas.....	25	25	15.6	6.1	21.7	34.5	12.3	46.8	7.7	0.6	.....	.....
Nebraska.....	11	40	9.5	5.0	14.5	28.3	10.1	38.4	8.0	.7	.....	.....
Southwestern Iowa.....	13	48	10.0	6.3	16.3	30.2	12.7	42.9	8.3	.7	.....	.....
East centra. Iowa.....	55	48	12.0	6.4	18.4	32.0	12.8	44.8	8.0	1.4	.....	.....
Western Illinois.....	30	46	13.1	6.6	19.7	33.2	12.9	46.1	8.1	1.0	.....	.....
Eastern Illinois.....	16	42	11.0	5.7	16.7	33.5	11.5	45.0	7.7	.6	.....	.....
Indiana.....	14	49	17.3	8.3	25.6	42.8	16.5	59.3	7.9	1.0	22	.....

EASTERN AREAS (CORN CUT AND HARVESTED FROM SHOCK).

Ohio.....	13	45	20.4	28.5	48.9	38.5	14.5	53.0	8.2	2.2	27	2.0
Virginia.....	12	52	22.1	27.9	50.0	41.9	17.7	59.6	10.4	2.0	35	1.6
Maryland.....	12	60	23.5	36.0	59.5	45.2	18.5	63.7	8.7	3.8	.....	2.2
Pennsylvania.....	22	62	19.1	31.2	50.3	40.6	13.4	54.0	7.6	4.0	51	2.8
Delaware.....	25	47	19.4	35.1	54.5	40.0	12.0	52.0	11.9	5.1	76	2.9

¹ The labor and material requirements as reported constitute 85 per cent of the operating expense in the Corn Belt and 88 per cent in eastern districts.

TABLE 445.—*Corn silage: Labor and material requirements per acre (271 records)*.

Region.	Number of records.	Average yield.	Man labor.			Horse labor.			Seed.	Manure.	Fertilizer.	Fuel.		Twine.	Per cent operating expense covered by foregoing.
			Prior to har-vest.	Harvest.	Total.	Prior to har-vest.	Harvest.	Total.				Gas.	Coal.		
		<i>Tons.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Lbs.</i>	<i>Loads.</i>	<i>Lbs.</i>	<i>Gals.</i>	<i>Lbs.</i>	<i>Lbs.</i>	
Minnesota.....	30	7.1	13.4	10.2	23.6	36.6	15.7	52.3	14.0	3.6	.....	.....	22.0	3.3	76
Wisconsin.....	97	9.4	14.5	15.6	30.1	34.1	19.5	53.6	11.4	4.7	.....	2.5	20.5	3.6	84
Iowa.....	55	9.8	12.9	15.0	27.9	31.9	20.0	51.9	9.9	2.2	.....	2.8	14.0	3.6	80
New York.....	83	13.0	26.5	25.6	52.1	45.3	19.6	64.9	24.2	6.1	219.0	2.1	16.0	4.1	84
Ohio.....	6	8.3	27.2	24.1	51.3	38.7	22.5	61.2	7.8	6.2	.....	.....	.....	2.2	79

¹ Excluding interest on land.

NOTE.—Data on labor and material required per acre are from U. S. Dept. of Agriculture Bul. 1000.

LABOR AND MATERIAL REQUIRED PER ACRE FOR DIFFERENT CROPS—Continued.

TABLE 446.—Cotton: Labor and material requirements per acre (842 records, 1918 crop).

Region.	Number records.	Yield of lint per acre.	Man labor.			Mule labor.			Seed.	Fertilizer.	Per cent of operating expense ¹ covered by foregoing.
			Prior to harvest.	Harvest.	Total.	Prior to harvest.	Harvest.	Total.			
South Carolina:		Lbs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Lbs.	Lbs.	
Anderson Co.	89	273	75	56	131	45	12	57	35	404	86
Barnwell Co.	91	268	73	63	136	45	17	62	31	555	86
Georgia:											
Laurens Co.	85	277	61	64	125	44	16	60	25	288	85
Greene Co.	78	260	74	57	131	47	13	60	35	257	85
Sumter Co.	80	244	51	55	106	53	11	64	38	236	84
Alabama:											
Tallapoosa Co.	89	172	85	39	124	50	9	59	35	187	87
Marshall Co.	90	227	76	51	127	51	8	59	30	333	85
Dale.	90	194	67	50	117	46	7	53	28	250	85
Texas:											
Ellis Co.	75	176	31	25	56	33	4	37	22	.....	79
Rusk Co.	75	185	49	37	86	42	8	50	25	145	83

¹ Excluding interest on land.

TABLE 447.—Cotton. Labor and material requirements per acre (821 records, 1919 crop).

Region.	Number of records.	Yield.		Man labor.			Mule labor.			Seed.	Fertilizer.	Ginning charge.	
		Lint.	Seed.	Prior to harvest.	Harvest.	Total.	Prior to harvest.	Harvest.	Total.				
South Carolina:		Lbs.	Lbs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Lbs.	Lbs.	P. cent.	
Anderson Co. 1.	74	286	405	80	60	140	45	14	59	35	449	\$1 00	
Barnwell Co. . .	76	248	408	65	52	117	41	12	53	28	699	1.04	
Georgia:													
Laurens Co.	77	93	168	55	23	78	39	3	42	26	254	1.24	
Greene Co.	74	225	413	63	45	108	40	8	48	37	235	1.11	
Mitchell Co.	50	159	300	61	39	100	43	5	48	30	277	1.07	
Alabama:													
Marshall Co. . .	79	272	473	70	58	128	46	11	57	31	369	1 02	
Lauderdale Co. .	84	192	345	69	51	120	47	7	54	29	168	1.10	
Mississippi:													
Washington Co. . .	29	171	391	87	54	141	47	5	52	35	.....	1.69
Monroe Co.	49	132	238	54	34	88	35	6	41	34	(²)	1.39	
Arkansas:													
Lee Co.	83	174	363	109	55	164	47	8	55	34	(²)	1 35	
Texas:													
Ellis.	71	{ ³ 50 ⁴ 23 ⁵ 24 }		134	31	15	46	29	2	31	22	1.80
Rusk.	75	61	106	48	16	64	37	3	40	22	105	1.87	

¹ On 34 owned farms producing wage cotton, man labor, mule labor, seed, fertilizer, and manure constituted 85 per cent of the total operating expense. By adding ginning to the foregoing list the operating expense amounted to 89 per cent of total cost, excluding interest on land.

² In Monroe County, Miss. fertilizer was applied on only 13 farms; in Lee County, Ark., on only one.

³ Picked cotton.

⁴ Bollie cotton.

⁵ Unginned seed cotton.

LABOR AND MATERIAL REQUIRED PER ACRE FOR DIFFERENT CROPS—Continued.

TABLE 448.—Potatoes: Labor and material requirements per acre (918 records), 1912–1913.

Region.	Number of records.	Normal yield per acre.	Man labor.			Horse labor.			Seed.	Ma-nure.	Ferti-lizer.	Per cent of operating ex-pense ¹ covered by fore-going.
			Prior to har-vest.	Har-vest.	Total.	Prior to har-vest.	Har-vest.	Total.				
Early:		<i>Bush.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Bush.</i>	<i>Loads.</i>	<i>Lbs.</i>	
Florida.....	42	122	44	60	104	62	18	80	13 2	.....	1,920	77
Texas.....	43	87	23	24	47	41	12	53	11.4	.....	.....	80
South Carolina.....	35	146	68	48	116	54	12	66	14 3	.....	1,980	80
Midsummer:												
Virginia—												
Norfolk.....	37	142	54	35	89	47	14	61	11.7	.....	1,840	78
Eastern shore.....	22	139	50	32	82	60	11	71	10 0	.....	1,300	72
New Jersey—												
Southern.....	31	173	38	32	70	43	25	68	10 8	4 7	1,680	89
Central.....	36	245	36	31	67	54	27	81	13 1	3 4	1,500	89
Long Island.....	82	167	43	32	75	48	20	68	12 0	2 1	1,840	89
Late:												
Maine—												
Aroostook County ..	81	254	44	51	95	70	34	104	13.8	2 2	1,840	87
Southern.....	23	259	48	57	105	71	44	115	14 2	4 7	1,800	90
New York—												
Northern.....	19	211	50	63	119	69	39	108	12.6	5.5	260	92
Western.....	68	151	41	42	83	59	33	92	11 8	5.3	120	87
Southern.....	56	135	42	50	92	50	31	81	9 4	4.2	160	90
Michigan—												
Southeast-ern.....	20	138	40	42	82	48	25	73	7.4	4.7	.....	91
Traverse Bay.....	20	148	46	56	102	40	27	67	9.9	3.6	.....	89
Southwest-ern.....	20	145	32	46	78	38	28	66	8.0	4.2	.....	89
Wisconsin—												
Central.....	47	127	26	34	60	31	30	61	7.0	2.6	.....	85
Southern.....	15	185	37	45	82	44	41	85	15.1	3.3	.....	87
Iowa—												
Eastern.....	22	174	36	33	69	52	33	85	14 7	4.5	.....	88
Grundy County ..	19	151	25	28	53	49	28	77	16.6	1.8	.....	87
Minnesota—												
Eastern.....	46	116	32	34	66	38	33	71	7.4	3.1	.....	87
Clay County.....	25	122	18	40	58	41	28	69	12.2	1.8	.....	77
Colorado—												
Greeley.....	44	217	31	42	73	67	28	95	11.3	2.2	.....	72
Montrose County ..	19	258	46	47	93	71	36	107	16.2	4 5	.....	73
Washington—												
Eastern.....	25	145	23	31	54	36	24	60	7.3	1.3	.....	74
Yakima.....	21	311	44	84	128	49	40	89	14.4	3 4	.....	73

¹ Excluding interest on land.

LABOR AND MATERIAL REQUIRED PER ACRE FOR DIFFERENT CROPS—Continued.

TABLE 449.—Potatoes: Labor and material requirements per acre (461 records, 1919).

Region.	Number of records.	Yield per acre.	Man labor.			Horse labor.			Seed.	Ma-nure.	Fer-ti-lizer.	Percent of operating ex-pense ¹ covered by fore-going.
			Prior to har-vest.	Har-vest.	Total.	Prior to har-vest.	Har-vest.	Total.				
Minnesota:		<i>Bush.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Bush.</i>	<i>Tons.</i>	<i>Lbs.</i>	
Clay County...	51	103	18.3	² 10.9	² 29.2	46.1	19.6	65.7	12.3	2.3	.....	74.5
Anoka County...	54	104	34.9	28.8	63.7	60.3	26.6	86.9	9.5	6.0	.....	77.2
Wisconsin:												
Barron County...	47	152	47.6	45.1	92.7	61.5	38.8	100.3	11.6	7.1	(³)	80.6
Waupaca County.....	50	123	41.7	35.7	77.4	46.3	30.9	77.2	10.6	5.5	.....	82.3
Michigan:												
Montcalm County.....	49	109	40.1	33.8	73.9	54.8	30.7	85.5	7.7	6.0	(³)	80.7
Grand Traverse County.....	52	124	49.9	40.3	90.2	54.4	23.6	78.0	11.3	5.0	.....	80.4
New York:												
Steuben County.....	50	141	40.8	46.3	87.1	58.4	40.0	98.4	11.2	4.5	(³)	81.2
Monroe County.....	50	110	47.9	37.7	85.6	76.5	39.5	116.0	13.2	7.1	(³)	81.2
Maine:												
Aroostook County.....	58	254	50.4	² 27.2	² 77.6	71.1	38.9	110.0	14.0	2.0	1,965	83.5

¹ Excluding interest on land.² Picking not included in time for harvesting and total hours.³ Commercial fertilizers not generally used.

TABLE 450.—Sugar beets: Labor and material requirements per acre (1,320 records, 1914-1916).

Region.	Number of records.	Yield per acre.	Farmers' labor.		Contract labor.		Total hours per acre.		Seed.	Ma-nure.	Fer-ti-lizer.	Per cent of operating ex-pense ¹ covered by fore-going.
			Ma-chine.	Hand.	Cash per acre.	Equi-valent hours.	Man.	Horse.				
California:		<i>Tons.</i>	<i>Hrs.</i>	<i>Hrs.</i>					<i>Lbs.</i>	<i>Tons.</i>	<i>Lbs.</i>	
Los Angeles...	81	14.5	27.7	.....	\$15.01	60.0	87.7	109.3	20.7	(²)	.....	84
Oxnard.....	45	9.5	20.2	.....	14.82	59.3	79.5	111.5	16.6	(²)	.....	85
Salinas.....	39	15.6	25.7	.....	18.87	75.5	101.2	124.3	14.6	(²)	.....	85
Utah-Idaho:												
Garland.....	79	14.8	36.7	21.2	18.87	75.4	133.3	98.5	14.7	5.1	.....	87
Provo.....	58	15.0	58.8	48.4	5.90	23.6	130.8	117.1	14.9	7.0	.....	86
Idaho Falls...	36	13.6	34.2	16.0	17.29	69.2	119.4	79.3	14.7	6.3	.....	83
Colorado:												
Greeley.....	195	15.6	48.5	6.3	17.26	69.1	123.9	104.5	18.0	8.3	.....	91
Fort Morgan...	66	13.6	45.3	18.7	13.52	54.1	118.1	103.0	21.1	4.4	.....	88
Rocky Ford...	106	13.0	56.0	4.9	14.11	56.4	117.3	132.7	21.7	3.6	.....	90
Montana:												
Billings.....	305	10.8	41.8	.....	18.64	93.2	135.0	94.2	17.2	4.5	.....	93
Michigan-Ohio:												
Caro.....	134	9.7	39.4	5.1	15.26	61.0	105.5	80.0	15.6	2.0	92	90
Alma.....	53	11.4	50.3	10.3	13.55	54.2	114.8	95.3	15.3	2.7	62	90
Grand Rapids...	36	10.2	45.3	15.4	12.66	50.6	111.3	93.8	14.2	2.8	94	90
Northwestern Ohio.....	97	13.2	38.6	5.8	17.24	69.0	113.4	79.1	15.2	(²)	61	89

¹ Excluding interest on land.² Manure applied on negligible number of farms.

LABOR AND MATERIAL REQUIRED PER ACRE FOR DIFFERENT CROPS—Continued.

TABLE 451.—*Tobacco: Labor and material requirements per acre.*

Region	Num-ber of rec-ords.	Yield.	Man labor			Horse labor			Ma-nure.	Per cent of operat-ing ex-pense ¹ covered by fore-going.
			Prior to har-vest.	Har-vest.	Total.	Prior to har-vest.	Har-vest.	Total.		
		<i>Lbs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Tons.</i>	
Wisconsin.....	19	1,300	90.8	104.3	195.1	65.5	25.2	90.7	8	77.8
Kentucky (Burley) ²	81	1,141	170.6	204.4	375.0	68.5	29.5	98.0	.....	75
Kentucky (dark) ²	70	825	146.3	115.7	262.0	60.7	28.3	89.0	.....	75

¹ Excluding interest on land.² See Kentucky Bulletin 229, "Cost of Producing Tobacco in Kentucky."TABLE 452.—*Field beans: Labor and material requirements per acre (166 records, 1917).*

Region.	Num-ber of rec-ords.	Yield per acre.	Man labor			Horse labor.			Seed.	Ma-nure.	Fertil-izer.	Coal.	Per cent of operat-ing ex-pense covered by fore-going ¹
			Prior to har-vest.	Har-vest.	To-tal.	Prior to har-vest.	Har-vest.	To-tal.					
		<i>Bush.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Lbs.</i>	<i>Tons.</i>	<i>Lbs.</i>	<i>Lbs.</i>	
New York.....	26	10.9	27.6	14.3	41.9	53.3	8.2	61.5	50	3.6	95	62	67
Michigan.....	23	10.5	27.0	12.4	39.4	42.9	7.1	50.0	46	1.3	30	86	67
Wisconsin.....	16	7.3	20.2	12.1	32.3	36.2	8.7	44.9	66	3.4	7	64	74
Average.....			25.6	13.1	38.7	45.5	7.9	53.4					
California (irr.).....	15	20.7	20.0	17.5	37.5	37.9	11.3	49.2	9-26	3 0	² 13.8		62
Colorado (irr.).....	16	25.0	27.9	18.4	46.3	55.5	12.0	67.5	30	.4		124	68
Average.....			24.1	17.9	42.0	46.9	11.7	58.6					
Colorado (dry).....	17	6.8	15.3	10.5	25.8	31.4	8.1	39.5	15			56	72
New Mexico (dry).....	23	4.1	17.3	10.8	28.1	33.6	6.3	39.9	17		² 2.5		82
Average.....			16.4	10.7	27.1	32.6	7.1	39.7					
California (dry).....	15	26.5	25.0	9.0	34.0	71.3	6.7	78.0	81		² 15.9		60
Idaho (dry).....	15	9.7	21.3	8.9	30.2	42.0	7.0	49.0	20-27		² 3.7		79
Average.....			23.2	9.0	32.2	56.7	6.8	63.5					

¹ Excluding interest on land.² Sacks.TABLE 453.—*Kajir and milo: Labor and material requirements per acre (96 records, 1917).*

Region.	Num-ber of rec-ords.	Yield per acre.	Man labor			Horse labor.			Seed.	Ma-nure.	Twine.	Per cent of operat-ing ex-pense covered by fore-going. ¹
			Prior to har-vest.	Har-vest.	Total.	Prior to har-vest.	Har-vest.	Total.				
		<i>Bush.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Lbs.</i>	<i>Tons.</i>	<i>Lbs.</i>	
Texas.....	40	20.8	9.7	6.7	16.4	29.5	8.8	38.3	3.8		0.5	67
Oklahoma.....	37	22.6	8.8	10.0	18.8	25.6	12.8	38.4	3.0	2.0	1.3	77
Kansas.....	19	23.2	11.4	12.9	24.3	26.4	15.4	41.8	5.1	5.3	3.6	78

¹ Excluding interest on land

LABOR AND MATERIAL REQUIRED PER ACRE FOR DIFFERENT CROPS—Continued.

TABLE 454.—Wheat: Labor and material requirements per acre (481 records, 1919).

Region.	Number of records.	Yield per acre.	Man labor.			Horse labor.			Seed.	Twine.	Per cent of operating expense covered by foregoing.
			Prior to harvest.	Harvest.	Total.	Prior to harvest.	Harvest.	Total.			
		<i>Bush.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Bush.</i>	<i>Lbs.</i>	
Spring wheat region:											
Grand Forks, N. D.	39	9.8	3.6	2.2	5.8	14.6	4.6	19.2	1.4	1.9	59
Morton, N. D.	39	4.4	5.4	3.8	9.2	19.6	6.1	25.7	1.2	1.1	68
Spink, S. D.	39	9.9	3.1	3.0	6.1	14.8	5.3	20.1	1.2	1.5	62
Clay, Minn.	38	8.1	4.2	4.0	8.2	15.1	7.3	22.4	1.4	2.2	67
Traverse, Minn.	42	8.4	4.1	4.7	8.8	17.3	8.4	25.7	1.4	2.0	72
Winter wheat region:											
Ord, Kans.	32	13.3	2.8	4.8	7.6	12.0	8.8	20.8	.8	1.2	63
Pawnee, Kans.	32	13.9	2.6	4.7	7.3	11.7	8.0	19.7	1.0	1.5	56
McPherson, Kans.	35	12.7	4.5	4.8	9.3	18.8	8.1	26.9	1.1	2.7	63
Saline, Mo.	29	16.3	5.1	8.1	13.2	18.5	11.1	29.6	1.3	2.8	63
Jasper, Mo.	30	19.2	8.1	9.4	17.5	26.8	12.7	39.5	1.2	2.3	75
St. Charles, Mo.	38	19.6	8.2	8.9	17.1	25.1	11.5	36.6	1.1	2.3	68
Phelps, Nebr.	30	10.8	3.7	5.5	9.2	13.0	8.6	21.6	1.0	2.7	69
Saline, Nebr.	35	18.1	6.7	8.1	14.8	24.7	12.4	37.1	1.4	3.7	71
Keith, Nebr.	23	18.1	2.7	6.9	9.6	9.3	10.1	19.4	.9	1.8	59

¹ Excluding interest on land.TABLE 455.¹—Labor and material requirements, winter wheat, 1920 (representing predominating practice in each region).

[453 records.]

Regions	Man hours.			Horse hours.			Seed.	Twine.	Land value.
	Preparation and seeding.	Harvest.	Total.	Preparation and seeding.	Harvest.	Total.			
Missouri:							<i>Bushels.</i>	<i>Pounds.</i>	
Pike County.....	7.4	7.1	14.5	24.6	9.6	34.2	1.30	1.5	\$122
Carroll County.....	7.3	9.3	16.6	26.1	13.0	39.1	1.23	2.2	219
Nebraska:									
Gage County.....	5.4	8.0	13.4	21.8	11.9	33.7	1.28	2.4	208
Clay County.....	4.3	5.5	9.8	18.3	9.5	27.8	1.21	2.4	171
Cheyenne County.....	3.4	5.2	8.6	14.0	9.8	23.8	.77	2.2	108
Kansas:									
Thomas County—									
Seeded.....	1.9	4.6	6.5	8.1	8.3	16.4	.74		61
Vol.....	.7	4.6	5.3	3.2	8.3	11.5			
McPherson County—									
Shock thrashed.....	4.5	4.0	8.5	18.5	7.5	26.0	1.06	2.0	140
Stack thrashed.....	4.5	5.0	9.5	18.5	8.1	26.6			
Pawnee County.....	2.2	4.4	6.6	10.6	7.2	17.8	.94		89
Oklahoma:									
Garfield County.....	4.9	4.3	9.2	20.1	6.9	27.0	1.07	2.5	120
Woodward County.....	3.8	4.2	8.0	14.4	8.3	22.7	.87		44

¹ From preliminary report on the cost of producing wheat.

LABOR AND MATERIAL REQUIRED PER ACRE FOR DIFFERENT CROPS—Continued.

TABLE 456.—*Oats: Labor and material requirements per acre (301 records).*

Region.	Number of records.	Yield per acre.	Man labor.			Horse labor.			Seed per acre.	Fertilizer.	Fuel (coal).	Twine per acre.	Per cent of operating expense covered by foregoing.
			Prior to harvest.	Harvest.	Total.	Prior to harvest.	Harvest.	Total.					
		<i>Bush.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Bush.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	
Minnesota.....	79	35.4	4.2	5.9	10.1	15.7	7.8	23.5	2.6	.....	.....	2.3	71
Wisconsin.....	92	35.7	6.0	9.0	15.0	16.3	7.7	24.0	2.2	.....	48.9	2.5	71
New York.....	9	50.4	8.3	10.5	18.8	18.0	7.6	25.6	2.4	192.1	69.5	2.6	70
Ohio.....	30	34.3	9.0	11.5	20.5	19.4	8.4	27.8	2.3	.....	49.5	2.2	71
Illinois.....	38	35.3	2.7	6.1	8.8	9.2	8.4	17.6	2.4	.....	43.8	2.1	61
North Dakota....	53	33.0	2.9	2.7	5.6	13.0	4.4	17.4	2.0	.....	.....	1.9	59

¹ Excluding interest on land.TABLE 457.—*Barley: Labor and material requirements per acre (154 records).*

Region.	Number of records.	Yield per acre.	Man labor.			Horse labor.			Seed.	Fertilizer.	Fuel (coal).	Twine.	Per cent of operating expense covered by foregoing. ¹
			Prior to harvest.	Harvest.	Total.	Prior to harvest.	Harvest.	Total.					
		<i>Bush.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Bush.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	
Minnesota.....	61	23.8	4.7	6.0	10.7	17.3	7.8	25.1	2.0	.....	.....	2.3	73
Wisconsin.....	37	27.3	6.4	10.5	16.9	18.6	8.7	27.3	1.7	.....	49.7	2.2	75
New York.....	9	32.4	6.9	9.6	16.5	14.6	7.8	22.4	2.1	195.0	77.6	2.7	75
North Dakota....	47	20.7	2.8	2.2	5.0	13.1	4.0	17.1	1.8	.....	.....	1.8	59

¹ Excluding interest on land.TABLE 458.—*Rye: Labor and material requirements per acre.*

Region.	Number of records.	Yield per acre.	Man labor.			Horse labor.			Seed.	Fertilizer.	Fuel (coal).	Twine.	Per cent of operating expense covered by foregoing. ¹
			Prior to harvest.	Harvest.	Total.	Prior to harvest.	Harvest.	Total.					
		<i>Bush.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Bush.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	
Minnesota.....	6	22.3	2.8	7.4	10.2	9.0	7.9	16.9	2.0	.....	.....	3.1	76
Wisconsin.....	12	16.2	4.5	9.9	14.4	12.3	8.5	20.8	1.1	.....	49.0	1.9	73
Ohio.....	10	14.6	6.0	10.4	16.4	11.9	7.5	19.4	1.9	.....	48.0	2.0	67
New York.....	(²)	17.0	9.9	13.4	23.3	21.2	7.1	28.3	1.9	183.0	Gal.	4.0	76
New Jersey.....	(²)	17.6	10.0	11.4	21.4	22.7	5.4	28.1	1.8	337.0	0.8	2.8	74

¹ Excluding interest on land.² Figures taken from the results of a special investigation.TABLE 459.—*Mixed tame hay: Labor and material requirements per acre (197 records).*

Region.	Number of records.	Yield per acre.	Man labor: Mowing, raking, and hauling.	Horse labor: Mowing, raking, and hauling.	Seed.		Per cent of operating expense covered by foregoing. ¹
					Timothy.	Clover.	
		<i>Tons.</i>	<i>Hours.</i>	<i>Hours.</i>	<i>Pounds.</i>	<i>Pounds.</i>	
Minnesota.....	11	1.5	7.8	10.1	4.6	4.0	74
Wisconsin.....	65	1.4	9.1	10.2	4.6	3.8	70
New York.....	23	1.4	7.9	7.7	9.2	4.9	82
Pennsylvania.....	37	1.5	7.5	7.8	9.1	10.5	80
Ohio.....	52	1.4	7.9	8.5	.....	.....	71
New England.....	9	1.6	10.7	9.5	10.0	² 12.0	77

¹ Excluding interest on land.² Timothy and redbtop.

LABOR AND MATERIAL REQUIRED PER ACRE FOR DIFFERENT CROPS—Continued.

TABLE 460.—Clover hay: Labor and material requirements per acre (99 records).

Region.	Number of records.	Yield per acre.	Man labor: Mowing, raking, and hauling.	Horse labor: Mowing, raking, and hauling.	Seed.	Per cent of operating expense covered by foregoing. ¹
		<i>Tons.</i>	<i>Hours.</i>	<i>Hours.</i>	<i>Pounds.</i>	
Minnesota.....	31	1.5	8.6	12.4	10.7	79
Wisconsin.....	37	2.2	14.2	15.5	7.2	79
New York.....	7	2.0	8.9	9.9	10.1	80
Ohio.....	20	1.6	11.6	10.5	.....	76
Illinois.....	4	1.3	8.7	10.0	7.2	.....

¹ Excluding interest on land.

TABLE 461.—Timothy hay: Labor and material requirements per acre (49 records).

Region.	Number of records.	Yield per acre.	Man labor: Mowing, raking, and hauling.	Horse labor: Mowing, raking, and hauling.	Seed.	Per cent of operating expense covered by foregoing. ¹
		<i>Tons.</i>	<i>Hours.</i>	<i>Hours.</i>	<i>Pounds.</i>	
Minnesota.....	13	1.3	8.0	11.4	5.4	80
Wisconsin.....	21	1.4	9.1	11.0	5.5	82
Ohio.....	8	1.2	7.9	9.2	.....	75
Iowa.....	7	1.8	7.5	8.8	4.0	70

¹ Excluding interest on land.

TABLE 462.—Alfalfa: Labor and material requirements per acre (105 records).

Region.	Number of records.	Yield per acre.	Man labor: Mowing, raking, and hauling.	Horse labor: Mowing, raking, and hauling.	Seed.	Per cent of operating expense covered by foregoing. ¹	Part of acreage cut more than once.	
							Two times.	Three times.
		<i>Tons.</i>	<i>Hours.</i>	<i>Hours.</i>	<i>Pounds.</i>		<i>Per cent.</i>	<i>Per cent.</i>
Minnesota.....	37	2.5	20.2	24.1	11.7	73	80	60
Wisconsin.....	39	2.4	21.8	21.2	18.0	72	93	59
Iowa.....	7	2.0	14.0	22.4	15.0	69	100	72
Illinois.....	3	1.9	19.2	23.7	13.7	63	.....	.....
Ohio.....	7	1.8	17.4	13.8	.....	67	86	58
New York.....	12	2.2	14.4	16.0	15.3	69	91	64

¹ Excluding interest on land.

TABLE 463.—Wild and grain hays: Labor and material requirements per acre (83 records).

Region.	Kind of hay.	Number of records.	Yield per acre.	Man labor.			Horse labor.			Seed.	Per cent of operating expense covered by foregoing. ¹
				Prior to harvest.	Harvest.	Total.	Prior to harvest.	Harvest.	Total.		
			<i>Tons.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Lbs.</i>	
Minnesota.....	Wild.....	52	1.3	.....	7.6	7.6	.....	10.9	10.9	.....	46
Do.....	Millet.....	8	1.7	6.9	11.3	18.2	23.2	12.7	35.9	35.9	69
North Dakota.....	do.....	5	1.9	3.2	5.1	8.3	14.3	8.1	22.4	21.0	83
Wisconsin.....	Grain.....	8	1.2	8.1	8.5	16.6	16.4	8.1	24.5	75.0	80
Illinois.....	do.....	2	.5	3.1	3.4	6.5	8.1	5.5	13.6	42.0	.....
Minnesota.....	do.....	8	1.3	9.0	8.3	17.3	9.8	9.8	18.7	70.4	.....

LABOR AND MATERIAL REQUIRED PER ACRE FOR DIFFERENT CROPS—Continued

TABLE 464.—*Timothy seed: Labor and material requirements per acre*

Region.	Number of records.	Yield per acre.	Man labor.		Horse labor.		Seed.	Twine.	Per cent of operating expense covered by foregoing. ¹
			Harvest.	Total.	Harvest.	Total.			
		<i>Bushels.</i>	<i>Hours.</i>	<i>Hours.</i>	<i>Hours.</i>	<i>Hours.</i>	<i>Lbs.</i>	<i>Lbs.</i>	
Minnesota.....	12	4.0	6.3	6.3	7.6	7.6	5.6	1.9	45
Wisconsin.....	4	1.7	3.9	3.9	4.4	4.4	4.6	.8	62
Iowa.....	10	5.8	6.9	6.9	7.6	7.6	4.0	3.1	49
Ohio.....	3	1.7	6.0	6.0	5.0	5.0	.....	.....	64
New York.....	.....	6.3	10.0	10.0	8.9	8.9	.....	.....	.....

¹ Excluding interest on landTABLE 465.—*Clover seed: Labor and material requirements per acre.*

Region.	Number of records.	Yield per acre.	Man labor.		Horse labor.		Seed.	Per cent of operating expense covered by foregoing. ¹
			Harvest.	Total.	Harvest.	Total.		
		<i>Bush.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Lbs.</i>	
Minnesota.....	8	0.9	5.3	5.3	7.2	7.2	10.7	56
Wisconsin.....	17	1.6	8.9	8.9	7.0	7.0	10.3	40
Ohio.....	19	1.0	6.0	6.0	5.3	5.3	.....	53
Illinois.....	2	.7	8.5	8.5	11.9	11.9	6.6	55

¹ Excluding interest on land.TABLE 466.—*Apples: Labor and material requirements per acre (642 records).*

Region.	Number of records.	Year.	Man labor.			Horse labor.			Spraying.				Part of operating expense covered by foregoing. ¹	Yield per acre. ²	Average land value per acre.	
			Prior to harvest.	Harvest.	Total.	Prior to harvest.	Harvest.	Total.	Manure.	Fertilizer.	Dormant spray solution.	Other sprays.				
												Number.				Solution.
<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Hrs.</i>	<i>Tons.</i>	<i>Lbs.</i>	<i>Gals.</i>	<i>Gals.</i>	<i>Per cent.</i>	<i>Boxes</i>					
Wenatchee Valley, Wash.	87	1914	230	364	594	96	62	158	2.2	.....	467	2.4	1,185	89	593	\$1,925
Yakima Valley, Wash.	120	1915	214	309	514	91	59	150	4.7	.....	431	4.0	1,619	89	432	1,080
Hood River, Oreg.	54	1915	142	164	306	82	33	115	1.5	.....	222	4.8	1,040	82	222	991
Payette Valley, Idaho.	38	1915	177	235	412	72	41	113	4.0	.....	389	3.1	1,155	93	337	613
Western Colorado.....	125	1914-15	161	191	352	76	47	123	3.5	.....	353	4.0	2,020	89	284	653
Western New York.....	218	1915	77	93	170	63	27	90	4.8	177	264	2.3	620	91	^{Bbls.} 84	514

¹ Per cent that man and horse labor, manure, fertilizer, spray materials and containers are of operating expense, exclusive of land rent.² The average yield represents the yield over a five or six year period.³ To reduce to boxes, multiply by 3.

TABLE 467.—Acre costs of production of corn, with yield per acre and percentage analysis of cost factors.

Region	Date	Basis.	Labor.	Animal power.	Labor and animal power.	Seed	Fertilizer	Machine	Twine	Equip-ment.	Over-head.	Land charge.	Total cost.	Cred-its	Net cost.	Yield.	Net cost, per bushel.
		<i>Acres.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>				<i>Bushel.</i>	
New York ¹	1914	97	37.2	25.6	62.8	1.2	0.9	11.3	0.6	7.9	0.3	15.0	\$35.98	.....	.....	34.8	.....
Minnesota:																	
Rice County ²	1902-1907	3 446.43			63.3	2.0				4.7		30.0	11.66			37.90	
Lyon County ²	1902-1907	4 338.41			61.4	2.0				5.6		31.0	9.66			46.24	
Rice County ²	1908-1912	3 301.34			53.6	2.7				7.8		27.8	16.21			28.38	
Lyon County ²	1908-1912	4 275.57			51.0	2.7				7.5		29.4	13.59			45.51	
Norman County ⁴	1908-1912	3 103.95			58.6	3.6				7.2		22.4	13.42			30.10	
Rice County ²	1908-1912	61.13			55.2	2.4			1.5	8.0		25.4	17.70			30.10	
Hastad ⁶	1913-1917	3 61.79			59.3	2.6				10.6		24.1	17.43			30.90	
Cokato ⁵	1913-1917	3 258.40			55.5	2.3				10.2		23.3	21.50			39.10	
Cokato ⁵	1913-1917	223.68			55.8	2.2			1.6	5.3		23.4	19.01			40.00	
Wisconsin:	1909-1918	506.25	32.8	24.5	57.3	2.0		11.2									
Kansas:																	
McPherson County ⁶	1920	647.2	18.3	23.4	41.7	1.5		4.0		6.7		36.8	22.45	\$0.05	\$22.39	26.8	\$0.84
Jackson County ⁶	1920	303.6	18.3	23.6	42.5	1.1		6.1		4.2		36.0	29.03	.27	28.76	44.8	.64
Missouri ⁷	1910-1913	337.0	22.7	26.6	49.3	2.1		2.9		7.5		38.2	13.52				
South Carolina ⁸	1914	1,683.0	30.8	24.5	55.3	.8	19.1			3.6		21.2	16.63			10.8	
Georgia, Brooks County ⁹	1914	47	32.2	24.7	56.9	.9	14.8			4.9		22.5	12.72			14.6	
Kansas:																	
.....	1917	25	24.5	33.8	58.3	1.5	2.8			10.9		26.5	22.10	.98	21.18	27.0	
.....	1921	26.6	26.6	22.9	49.5	1.0		3.1		11.0		35.4	20.43	.53	19.90	35.0	.57
Nebraska:																	
.....	1917	11	12.9	28.0	47.2	1.3	3.9			8.4		39.2	21.89	1.75	20.14	40.0	.57
.....	1921	13.7	13.7	16.3	31.7	1.1		3.6		7.0		56.6	23.58	.85	22.73	40.0	.47
Southwest Iowa:																	
.....	1917	18	18.7	26.5	45.2	2.2	3.8			8.4		40.4	24.33	1.98	22.35	48.0	.53
.....	1921	14.8	14.8	15.7	30.5	1.8		3.3		12.1		52.3	27.42	.90	26.52	45.0	.53
East central Iowa:																	
.....	1917	55	18.6	25.7	44.7	2.2	7.7			9.4		36.0	26.16	2.00	24.16	48.0	.50
.....	1921	18.5	18.5	18.5	27.3	1.5		7.4		8.4		49.9	27.58	.70	24.58	50.0	.41
Western Illinois:																	
.....	1917	30	13.2	17.9	37.1	1.1	5.9			10.4		35.5	25.33	2.00	23.33	46.0	.51
.....	1921	13.7	13.7	17.9	37.1	1.1		5.8		9.8		46.2	25.73	.70	23.03	45.0	.56
Eastern Illinois:																	
.....	1917	16	17.7	10.0	36.7	1.4	3.7			8.8		38.3	23.67	1.19	22.38	42.0	.53
.....	1921	17.7	17.7	10.0	36.7	1.4		3.4		8.2		50.4	23.67	.65	23.02	40.0	.58
Indiana:																	
.....	1917	14	22.7	33.2	53.5	.9	6.8			10.5		28.3	30.29	1.68	28.61	49.0	.55
.....	1921	22.7	22.7	33.2	43.7	.8	1.1	6.0		10.6		37.5	28.19	.78	27.41	50.0	.54
Average, western section:		169	19.0	18.5	49.9	1.2	4.9			8.9		47.6	24.99	1.73	23.41	46.0	.53
Ohio:																	
.....	1917	13	31.2	25.1	55.3	.8	9.9		.9	10.3		21.8	42.28	5.58	36.70	45.0	.82
.....	1921	20.4	20.4	20.7	50.1	.7		10.2	.8	10.8		26.5	38.33	3.17	35.16	45.0	.78

	1917	1918	1919	1920	1921	1917	1918	1919	1920	1921	1917	1918	1919	1920	1921	1917	1918	1919	1920	1921	1917	1918	1919	1920	1921
Virginia ^a	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12
Maryland ^a	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12
Pennsylvania ^a	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12
Delaware ^a	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12
Average, eastern section ^c	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12

¹ New York Department of Agriculture Bul. 83.

² U. S. Department of Agriculture, Bureau of Statistics, Bul. 73.

³ Husked from standing stalks.

⁴ Minnesota Bul. 145.

⁵ Minnesota Bul. 179.

⁶ Unpublished data in files of U. S. Department of Agriculture.

⁷ Missouri Bul. 125.

⁸ U. S. Department of Agriculture Bul. 651.

⁹ U. S. Department of Agriculture Bul. 648.

¹⁰ Overhead included in equipment.

¹¹ Cut and harvested from shock.

NOTE.—The Crop Reporter for April, 1911, gives the results of an investigation on the cost of producing corn, which data have not been used in the above tabulation.

TABLE 468.—Acre costs of production of cotton, with yield per acre and percentage analysis of cost factors.

Region.	Date.	Basis.	Labor.	Antimal power.	Labor and animal power.	Seed.	Measure.	Per-till-zer.	Sacks and sheets.	Insurance and taxes.	Equipment.	Overhead.	Ginning.	Land charge.	Total cost.	Credits.	Net cost.	Yield, lint.	Net cost per lb.
			Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.				Lbs.	
Georgia:																			
Lanier ¹	1918	3988.0 acres.	60.1	9.6	63.7	1.7	0.1	5.1	0.3	0.4	2.3	7.7	2.9	9.8	\$74.99	\$15.55	\$59.44	277	\$0.214
Greene County ¹	1918	4,147.5 acres.	58.6	9.7	68.3	2.4	.5	5.6	.2	.2	2.2	7.7	2.8	10.1	74.07	15.81	58.26	260	.224
Sumter County ¹	1918	4,138.5 acres.	51.7	12.1	63.8	3.2	.7	7.8	.3	.4	2.6	7.6	3.0	10.6	63.43	15.35	48.08	244	.197
Brooks County ²	1911	53 records	51.8	16.2	65.6	1.6	.8	12.2			3.5		4.8	11.5	28.10			273	
Upland cotton ³	1911	91 records	51.8	16.2	68.0	1.3		13.9			3.1		4.8	8.9	34.16			316	.108
Sea Island cotton ³	1911	3 records	54.5	15.5	70.0	.6		11.3			3.2		6.6	8.3	36.34			223	.159
Alabama:																			
Tallapoosa County ¹	1918	1,169.0 acres.	66.0	9.9	75.9	2.2	.4	4.3	.3	.2	2.2	8.3	1.9	4.3	71.86	10.31	61.55	172	.357
Marshall County ¹	1918	1,249.5 acres.	56.9	8.0	64.9	1.9		7.2	.3	.3	3.0	7.7	2.2	10.4	89.14	13.72	75.42	227	.332
Dale County ¹	1918	1,226.5 acres.	60.9	9.5	70.4	2.5	.6	5.3	.4	.3	2.4	7.9	2.4	7.8	67.28	13.17	54.11	194	.279
South Carolina:																			
Anderson County ¹	1918	2,865.5 acres.	54.3	8.5	62.8	2.1	.6	7.4	.2	.4	1.9	7.3	2.5	14.8	79.88	14.80	65.08	248	.262
Barrow County ¹	1918	3,935.5 acres.	52.0	9.4	61.4	1.9	.6	14.1	.3	.2	2.1	7.8	2.6	9.0	79.79	11.13	68.66	238	.245
Anderson County ¹	1914	4,430.0 acres.	41.7	20.5	62.2	1.6		16.2			2.9	2.7		14.4	25.03			233	
Orangeburg County ²	1915	253 records.			58.6	1.5	3.1	15.7			2.5		4.2	14.4	34.72			310	
Texas:																			
Ellis County ¹	1918	8,148.0 acres.	38.1	9.6	47.7	2.5			.1	.9	3.2	5.0	4.0	36.6	46.01	9.78	36.23	176	.205
Rusk County ¹	1918	2,568.0 acres.	56.9	11.4	68.3	2.2		4.1	.5	.6	3.3	7.5	3.5	10.0	51.55	10.19	41.36	185	.223
Ellis County ²	1914	114 records.	45.0	20.0	65.0	2.2					3.3		6.3	22.4	22.31			241	
Mississippi:																			
Choctawhatchee County ²	1914	91 records	67.4	1.4	68.4	1.3		1.9			2.7		6.5	22.0	33.92			346	
Do. ²	1914	34 records			68.4	1.3					2.4		5.8	20.2	37.41			318	
Oklahoma:																			
Payne County ²	1914	23 records			80.9	1.6					3.3		5.8	8.1	23.91			197	
North Carolina:																			
Northeast ²	1916	48 records			64.2	2.1	6.2	7.5			2.2		4.6	13.2	53.68			383	

¹ U. S. Department of Agriculture Bul. 896.² Unpublished data in office files, U. S. Department of Agriculture.³ U. S. Department of Agriculture Bul. 648.⁴ U. S. Department of Agriculture Bul. 651.⁵ U. S. Department of Agriculture Bul. 659.

NOTE.—Bul. 16 (Misc. Series), U. S. Department of Agriculture, Division of Statistics, 1899, which gives cost for all cotton States, has not been included in the above table.

TABLE 469.—*Acres costs of production of wheat, with yield per acre and percentage analysis of cost factors.*

Region.	Date.	Basis.	Labor.	Animal power.	Labor and animal power.	Trac- tor.	Equip- ment.	Seed.	Twine.	Ma- nure.	Ferti- lizer.	Thresh- ing.	Wa- ter.	Special crop insur- ance.	Over- head.	Land charge.	Total cost.	Cred- its.	Net cost.	Yield.	Net cost per bush- el.
		Acres.	P. d.	P. d.	P. d.	P. d.	P. d.	P. d.	P. d.	P. d.	P. d.	P. d.	P. d.	P. d.	P. d.	P. d.	P. d.			Bush.	
Minnesota:																					
Rice County ¹	1902-1907	41.70	32.0	32.8	32.0	5.3	13.7	2.9	1.2	2.9	3.6	3.6				35.5	89.88			15	15.88
Rice County ²	1908-1912	346.98	32.8	32.8	32.0	7.8	13.5	1.2	3.5	1.2	4.3	4.3				34.5	13.04			15	15.88
Lyon County ¹	1902-1907	3,891.98	33.7	33.7	33.0	6.7	11.9	3.5	3.5	3.5	8.8	8.8				35.7	8.39			22.59	12.59
Lyon County ²	1908-1912	415.32	34.0	34.0	34.0	7.0	13.3	1.9	1.9	1.9	6.8	6.8				35.7	12.00			22.01	12.59
Norman County ¹	1902-1907	5,196.83	33.7	33.7	33.0	6.3	11.9	2.9	2.9	2.9	3.8	3.8				30.1	6.98			12.36	12.36
Norman County ²	1908-1912	3,650.52	38.4	38.4	38.0	6.4	12.5	1.7	1.7	1.7	3.8	3.8				30.1	10.37			16.61	16.61
Wisconsin:																					
North Dakota ¹	1909-1918	77	22.3	21.9	21.9	4.4	13.5	1.5	1.5	1.5	4.6	4.6				1.4	12.10			17.0	17.0
North Dakota ²	1911-1916	17.6	23.0	23.0	23.0	5.9	13.2	1.9	1.9	1.9	5.8	5.8				20.8	11.22			13.2	13.2
North Dakota ³	1917	16.7	22.7	22.7	22.7	5.9	17.4	2.0	2.0	2.0	8.3	8.3				14.9	13.75			27.4	27.4
New York ¹	1913	38	17.5	19.2	19.2	4.8	8.9	1.3	1.3	1.3	30.8	3.8				13.7	28.88			23.0	23.0
New York ²	1914	136.8	17.7	20.7	20.7	6.2	7.4	1.1	1.1	1.1	13.6	7.2				21.5	23.19			23.0	23.0
Missouri ¹	1910-1913	145	16.7	18.8	18.8	6.4	9.3				15.9	6.1				18.9	7.92			6.0	6.0
Missouri ²	1914	67.2	23.5	22.7	22.7	3.0	9.9														
Colorado:																					
Greeley ¹	1917	160	11.9	11.9	11.9	1.7	5.4	1.9	1.9	1.9	7	20.5	3.3			40.0	41.19			47.4	47.4
Fort Morgan ¹	1917	102	16.7	17.8	17.8	2.1	4.6	1.6	1.6	1.6	3.4	10.1	2.2			3.8	34.0			21.3	21.3
Rocky Ford ¹	1917	82	21.6	23.6	23.6	1.5	7.0	1.3	1.3	1.3	2.2	10.2	1.8			4.7	26.1			33.6	33.6
Winter wheat:																					
Kansas:																					
Ford County ¹	1919	9,817	18.8	19.7	19.7	0.5	4.6	7.2	1.3	9.3		10.3				24.5	25.01	\$0.71	\$24.30	13.3	\$1.83
Pawnee County ¹	1919	9,092	14.7	13.3	13.3	1.1	5.4	8.8	.9	9.4		11.0				31.9	24.35	1.29	23.06	13.9	1.66
McPherson County ¹	1919	4,652	17.9	16.8	16.8	1.1	6.4	7.6	2.1	9.13		9.2				27.4	30.88	.68	30.20	12.7	2.38
Missouri:																					
Saline County ¹	1919	2,362	17.3	13.1	13.1	.5	4.0	7.3	1.8	.2		9.0				37.1	37.55	2.27	35.28	16.3	2.16
Insper County ¹	1919	2,949	19.9	18.2	18.2	.5	4.9	7.0	1.5	9.12	5.8	4.1				28.8	35.78	1.14	34.64	19.2	1.80
St. Charles County ¹	1919	3,085	19.4	16.3	16.3	1.4	6.1	7.4	1.6	9.21		5.4				32.6	34.64	.51	34.13	19.6	1.74
Nebraska:																					
Phelps County ¹	1919	4,404	20.2	17.1	17.1	.6	5.1	8.8	2.6	.7		4.9				28.8	24.11	.27	23.84	10.8	2.21
Saline County ¹	1919	2,008	19.8	17.1	17.1	.9	4.8	7.5	2.2	.7		5.0				33.2	36.88	.34	36.54	18.1	2.18
Keith County ¹	1919	4,395	26.4	5.5	5.5	4.8	5.8	6.0	1.5	.1		6.6				33.3	28.78	.26	28.52	18.1	1.83
Average winter wheat area ¹	1919	42,714	18.7	15.7	15.7	1.2	5.3	7.6	1.6	9.7	.5	8.0				30.0	28.61	.82	27.80	14.9	1.87

¹ U. S. Department of Agriculture, Bureau of Statistics, Bul. 73² Minn. Bul. 145.³ Unpublished data in the files of the U. S. Department of Agriculture.⁴ New York Department of Agriculture Bul. 86.⁵ Missouri Bul. 125.⁶ U. S. Department of Agriculture Bul. 651.⁷ U. S. Department of Agriculture Bul. 917.⁸ U. S. Department of Agriculture Bul. 943.⁹ Manure and straw.

TABLE 469.—*Acres costs of production of wheat, with yield per acre and percentage analysis of cost factors—(continued)*

Region.	Date.	Basis	Labor.	Anti-animal power.	Labor and animal power.	Tractor.	Equip-ment.	Seed.	Twine.	Ma-nure.	Ferti-lizer.	Thresh-ing.	Wa-ter.	Special crop insur-ance.	Over head charge.	Land charge.	Total cost.	Cred-its.	Net cost.	Yield.	Net cost per bush-el.
Spring wheat: Minnesota—	1919	Acres.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	Bush.	\$2.53
	1919	10,376	15.2	15.8	31.0	2.9	5.6	14.7	2.1	91.7	.....	5.0	.....	.....	.....	26.2	\$23.49	\$0.55	\$22.91	8.1	2.81
Traverse County	1919	7,071	17.4	19.8	37.2	.9	6.0	13.9	1.9	9.9	.....	4.8	.....	.5	.....	25.0	23.91	.30	23.61	8.4	2.81
	1919	7,071	17.4	19.8	37.2	.9	6.0	13.9	1.9	9.9	.....	4.8	.....	.5	.....	25.0	23.91	.30	23.61	8.4	2.81
North Dakota—	1919	10,060	12.0	16.5	28.5	.3	6.8	15.4	2.6	91.0	.....	12.6	.....	.8	.....	19.1	22.07	.19	21.88	9.8	2.23
	1919	5,940	20.4	23.4	43.8	1.0	10.3	15.4	.1	91.5	.....	2.2	.....	1.1	.....	11.1	19.33	.50	18.83	4.4	4.26
Grand Forks County	1919	9,500	13.5	14.9	28.4	1.1	5.7	11.7	1.7	9.7	.....	11.2	.....	1.1	.....	31.7	23.89	.19	23.70	9.9	2.39
	1919	42,847	15.1	17.3	32.4	1.3	6.5	14.1	1.9	91.1	.....	7.8	.....	1.2	.....	23.9	22.75	.35	22.40	8.4	2.67
Missouri: Carroll County	1920	2,388	16.7	15.8	32.5	.....	8.5	8.5	.9	92.8	7.9	4.8	.....	.3	.....	24.5	33.65	1.09	32.56	13.5	2.41
	1920	2,009	19.8	16.2	36.0	.....	8.3	7.4	.9	91.1	.....	7.8	.....	.4	.....	31.3	36.08	.71	35.37	17.6	2.01
Nebraska: Gage County	1920	2,076	17.7	13.6	31.3	.....	6.7	7.2	1.1	1.0	.....	6.0	.....	.5	.....	38.8	37.72	.48	37.24	21.5	1.73
	1920	2,792	16.2	13.4	29.6	.....	4.5	7.6	1.1	9.6	.....	5.2	.....	.8	.....	40.1	33.79	.19	33.60	13.1	2.56
Cheyenne County	1920	5,185	17.7	5.8	23.5	.....	10.5	6.1	1.1	9.3	.....	6.5	.....	4.8	.....	32.3	27.55	.30	27.25	19.0	1.43
	1920	11,008	20.7	13.3	34.0	.....	8.1	8.7	.1	9.1	.....	11.5	.....	6.8	.....	28.0	18.20	.37	17.83	14.1	1.26
Kansas: Thomas County	1920	4,789	16.1	12.4	28.5	.....	8.8	8.2	.9	9.8	.....	8.5	.....	.5	.....	35.8	20.72	.10	20.62	11.6	2.03
	1920	13,073	18.6	10.0	28.6	.....	8.2	9.0	.3	9.2	.....	9.2	.....	1.3	.....	26.0	25.31	.09	24.62	12.1	2.03
Oklahoma: Pawnee County	1920	7,069	14.2	12.0	23.2	.....	12.2	7.6	1.1	9.3	.....	14.0	.....	.3	.....	30.6	30.81	.26	30.55	18.1	1.66
	1920	7,351	18.6	17.0	35.6	.....	9.2	8.0	.....	9.3	.....	9.2	.....	.9	.....	11.6	22.16	.31	21.85	9.5	2.30
Woodward County	1920	7,351	18.6	17.0	35.6	.....	9.2	8.0	.....	9.3	.....	9.2	.....	.9	.....	11.6	22.16	.31	21.85	9.5	2.30
	1920	7,351	18.6	17.0	35.6	.....	9.2	8.0	.....	9.3	.....	9.2	.....	.9	.....	11.6	22.16	.31	21.85	9.5	2.30

¹⁰ Preliminary report on cost of producing wheat.
¹¹ Manure and straw.
¹² U. S. Department of Agriculture Bul. 943.
 NOTE.—The Crop Reporter for May, 1911, gives the results of an investigation on the cost of producing wheat, which data have not been used in the above tabulation.

TABLE 470.—Acre costs of production of barley, with yield per acre and percentage analysis of cost factors.

Region.	Date.	Basis.	Labor.	Animal power.	Labor and animal power.	Equip-ment.	Seed.	Twine.	Manure.	Thresh-ing.	Over-head.	Land charge.	Water.	Total cost.	Yield.	Gross cost per bushel. ¹
Minnesota:																
Rice County ²	1908-12	Acres.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.		Bushels.	\$0.49
Lyon County ²	1908-12	375.31	.....	.....	31.8	7.6	13.7	1.5	.....	5.5	5.9	34.0	.....	\$13.26	27.09	.48
Norman County ²	1908-12	718.4	.....	.....	33.8	7.2	11.9	1.9	.....	6.7	5.6	32.9	.....	12.17	25.62	.48
Wisconsin ³	1908-12	1,364.59	.....	.....	38.8	6.1	12.1	1.7	.....	7.9	5.6	27.8	.....	10.80	26.86	.40
North Dakota ³	1910-13	474.5	17.5	18.8	36.3	4.9	9.2	1.4	8.8	4.2	7.9	27.3	.....	14.55	24.2	.60
North Dakota ³	1911-16	.....	19.2	24.7	43.9	5.8	10.7	1.9	5.7	11.4	.....	20.6	.....	11.38	21.7	.52
Colorado:	1917	.....	18.6	24.5	43.1	5.9	12.8	2.0	8.3	13.0	.....	14.9	.....	15.73	21.7	.72
Greeley Co. ⁴	1918	742.0	11.2	11.0	22.2	1.7	4.7	1.6	3.5	15.5	7.1	40.6	3.1	40.55	53.9	.75
Fort Morgan Co. ⁴	1918	144.0	15.6	18.1	33.7	2.2	4.2	1.4	4.3	9.6	7.9	34.6	2.1	43.49	46.7	.93

¹ Value of straw not deducted because of lack of data.² Minnesota Bul. 145.³ Unpublished data in office files, U. S. Department of Agriculture.⁴ U. S. Department of Agriculture Bul. 917.

TABLE 471.—Acre costs of production of rye, with yield per acre and percentage analysis of cost factors.

Region.	Date.	Basis.	Labor.	Animal power.	Labor and animal power.	Equip-ment.	Seed.	Twine.	Manure.	Ferti-lizer.	Thresh-ing.	Over-head.	Land charge.	Total cost.	Yield per acre.	Gross cost per bushel. ¹
Minnesota:																
Rice County ²	1908-1912	Acres.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.		Bushels.	\$0.77
Lyon County ²	1908-1912	4.78	.....	.....	33.6	7.9	9.8	1.2	.....	.....	7.2	5.1	35.2	\$12.78	14.18	.65
Norman County ²	1908-1912	37.98	.....	.....	31.3	8.0	12.8	2.0	.....	.....	4.6	4.8	36.5	10.96	.....	.65
Halstad ³	1913-1917	115.65	.....	.....	43.1	6.2	11.0	1.2	.....	.....	5.6	4.8	28.1	10.07	.....	.65
Cokato ³	1913-1917	128.8	.....	.....	47.3	7.1	6.7	1.5	.....	.....	6.3	3.6	27.5	15.28	.....	.65
Wisconsin ⁴	1909-1918	30.84	.....	.....	39.6	9.4	5.7	1.7	.....	.....	7.2	6.4	30.0	16.66	.....	.65
New York ⁴	1918	101.0	19.3	18.4	37.7	4.2	7.5	2.0	5.7	.....	5.0	2.8	35.1	11.21	16.2	.69
New York ⁴	1918	.....	23.5	19.1	42.6	6.9	12.9	2.9	.....	.....	4.0	10.2	10.5	33.44	15.0	.69
New Jersey ⁴	1918	.....	23.1	18.8	41.9	6.4	11.7	3.2	.....	.....	4.6	10.4	10.5	39.14	20.0	1.96
New Jersey ⁴	1918	.....	21.4	19.7	41.1	6.8	9.8	1.8	.....	.....	7.0	4.8	13.0	33.62	17.5	2.01
Georgia ⁵	1915	60	17.5	16.0	33.5	5.8	12.1	2.0	.....	.....	15.7	4.7	23.3	42.92	25.0	1.72
Georgia ⁵	1914	12	19.7	21.5	41.2	4.4	16.5	1.0	.....	.....	18.6	4.7	24.2	8.59	7.9	1.09

¹ Value of straw not deducted because of lack of data.² Minnesota Bul. 145.³ Unpublished data in office files, U. S. Department of Agriculture.⁴ U. S. Department of Agriculture Bul. 648.⁵ Minnesota Bul. 179.

TABLE 472.—*Acres costs of production of potatoes, with yield per acre and percentage analysis of cost factors.*

Region.	Date.	Basis.	Labor.	Anti-mal power.	Labor and animal power.	Seed and seed treatment.	Ma-nure.	Fertilizer.	Spray materials.	Equip-ment.	Over-head.	Con-tain-ers.	Stor-age.	Water rent.	Land charge.	Total cost.	Yield.	Cost per bushel
			Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.		Bu.	\$0.76
Minnesota:	1919	2,558 acres...	25.5	19.3	44.8	16.2	5.1	.....	1.6	6.9	7.4	5.1	2.2	.....	10.7	\$78.09	103.1	.85
Clay County ¹	1919	870 acres...	25.0	19.1	44.1	12.8	9.8	.....	2.8	8.5	5.7	1.6	1.2	.....	13.5	88.27	104.3	.85
Anoka County ¹	1913-14	828 acres...	34.1	18.5	52.6	10.8	13.4	.....	1.8	3.9	4.4	.9	.....	.....	12.2	38.32	116.0	.33
Anoka, Chicago, Isanti, Milne Lees, and Sherburne Coun- ties ¹																		
Clay County ¹	1913-14	3,450 acres...	29.2	16.2	45.4	16.9	5.1	.....	1.2	4.7	4.1	10.5	.....	.....	12.1	42.35	122.0	.35
Unfertilized land ²	1907	331.04 acres...	.....	.....	57.5	22.0	.....	.....	6.8	2.3	.....	.....	.....	.....	11.4	26.37	127.0	.21
Fertilized land ²	1907	297.06 acres...	.....	.....	45.2	23.2	.....	17.2	4.8	1.6	.....	.....	.....	.....	8.0	37.72	102.0	.23
Clay County ³	1907-1909	959.74 acres...	.....	.....	49.6	28.6	.....	.....	5.0	1.9	3.7	1.9	.....	.....	9.3	32.18	93.0	.35
Wisconsin:																		
Barron County ¹	1919	381 acres...	29.7	18.6	48.3	11.5	12.8	.1	2.8	7.5	6.6	.3	.1	.....	10.0	107.60	151.7	.71
Waupaca County ¹	1919	614 acres...	27.8	17.3	45.1	13.9	13.9	.....	2.3	7.2	6.2	.3	.1	.....	11.0	88.08	122.8	.72
Waushara, Waupaca, and Portage Counties ¹	1913-14	987 acres...	32.2	18.2	50.4	10.1	14.2	.....	1.3	6.0	4.6	1.3	.....	.....	12.1	33.47	127.0	.26
Sauk County ¹	1913-14	195 acres...	31.1	17.9	49.0	15.9	9.8	.....	.2	4.2	5.5	1.3	.....	.....	14.1	47.43	185.0	.26
Wisconsin ¹	1909-18	271.5 acres...	.....	.....	57.0	14.9	10.8	.....	.....	6.7	.....	.....	.....	.....	10.6	36.03	110.0	.27
Michigan:																		
Montcalm County ¹	1919	508 acres...	28.3	20.0	48.3	9.1	15.8	.1	2.3	8.4	6.6	.3	.3	.....	8.8	84.34	108.7	.78
Grand Traverse County ¹	1919	497.5 acres...	30.7	17.2	47.9	13.3	13.1	.....	1.9	6.9	8.2	.7	.2	.....	7.8	80.85	124.2	.72
Oakland County ¹	1913-14	220 acres...	35.9	18.9	54.8	9.0	17.4	.....	.5	2.6	4.3	1.0	.....	.....	10.5	38.64	128.0	.28
Grand Traverse and Leelanau Counties ¹	1913-14	260 acres...	37.4	14.3	51.7	10.8	16.2	.....	1.8	2.2	4.5	.9	.....	.....	11.9	46.21	143.0	.31
Montcalm County ¹	1913-14	340 acres...	34.7	17.3	52.0	8.0	17.1	.....	.7	2.6	4.8	1.1	.....	.....	13.1	38.07	145.0	.26
New York:																		
Steuben County ¹	1919	560.5 acres...	27.4	24.6	52.0	11.7	11.7	1.9	1.3	8.2	7.6	.5	.1	.....	5.0	96.14	141.0	.68
Monroe County ¹	1919	539.5 acres...	23.1	47.0	11.9	12.7	12.7	1.4	.9	8.1	7.3	.....	.....	.....	9.9	110.85	100.8	1.06
Franklin County ¹	1913-14	142.5 acres...	26.6	17.1	43.7	11.7	24.4	6.6	1.9	2.4	3.7	.....	.3	.....	5.6	63.12	211.0	.30
Montgomery and Genesee Counties ¹	1913-14	877.2 acres...	27.4	18.9	47.3	12.4	14.5	3.2	2.1	4.4	4.8	.....	.....	.....	11.3	45.84	151.0	.30
Livingston, Steuben, Schuy- ler, and Chemung Counties ¹	1913-14	500 acres...	34.6	19.0	53.6	11.7	14.1	4.9	.4	4.7	3.9	.....	.....	.....	6.7	42.65	135.0	.32
Suffolk County ¹	1913-14	2,000.8 acres...	13.6	8.1	21.7	13.0	5.2	33.5	1.8	3.0	5.0	.....	.....	.....	11.8	82.83	167.0	.50
New York ⁴	1912	57.5 acres...	21.9	48.5	23.3	.....	.....	10.3	2.6	6.1	1.1	.....	.8	.....	7.3	64.88	102.49	.63
New York ⁴	1913	185.4 acres...	26.3	20.6	46.9	13.5	10.6	.....	1.3	6.9	1.1	.....	.....	.....	8.0	67.11	102.66	.55
New York ⁶	1914	158.8 acres...	27.2	21.7	48.9	14.0	8.1	10.0	1.3	6.5	.1	.....	.....	.....	9.1	56.79	154.7	.37
Maine:																		
Aroostook County ¹	1919	1,633 acres...	19.1	11.6	30.7	9.9	2.1	36.4	2.1	4.1	8.0	1.2	.5	.....	5.0	219.60	253.6	.87
Aroostook County ¹	1913-14	2,511 acres...	21.7	11.3	33.8	9.3	4.8	33.1	1.0	3.3	4.4	.....	.....	.....	8.2	91.48	254.0	.36
Waldo and Kennebec Coun- ties ¹	1913-14	276 acres...	21.0	12.8	33.8	7.0	8.3	38.3	1.9	3.3	3.7	.....	.4	.....	3.3	80.94	256.0	.35

	1913-14	1913-14	20.2	19.0	11.9	32.5	2.2	3.1	4.2	.4	6.5	84.92	17.10	.47
New Jersey:														
Southern ¹	1913-14	31 records	22.9	21.7	7.7	28.5	1.2	3.1	4.5	.8	9.8	80.78	245.0	.33
Central ¹	1913-14	36 records	31.0	35.2	62.0	28.5	1.2	5.4	.3	.6	10.5	153.16	193.0	.95
Monmouth ¹	1919	21.7	36.5	10.8	7 12.6	25.0	2.2	5.0	.1	1.1	6.1	163.17	134.0	1.23
Salen ¹	1919	21.7	36.7	8.9	7 16.1	23.4	2.7	5.5	.1	1.4	5.3	177.01	116.0	1.21
Cumberland ¹	1913-14	32 records	21.7	18.0	3.2	33.5	1.8	3.0	5.0	.....	11.8	82.83	167.0	.50
Long Island ¹														
Virginia:														
Norfolk ¹	1913-14	87 records	21.3	14.4	.....	33.2	1.4 ²	1.7	4.4	12.5	11.1	95.48	142.0	.67
Eastern Shore ¹	1913-14	22 records	23.0	12.5	.....	28.5	.....	1.8	4.7	16.6	15.2	83.79	139.0	.60
Georgia ³ , Brooks County ³	1914	41 records	30.9	22.1	.....	33.5	.....	3.4	.....	1.7	13.4	37.17	69.0	.54
Florida ¹	1913-14	31 records	24.1	14.1	.....	22.3	.....	1.1	4.0	15.5	8.6	89.70	122.0	.74
South Carolina ¹	1913-14	35 records	24.1	12.3	.....	33.1	.....	2.5	3.7	13.8	8.5	93.46	140.0	.64
Texas ¹	1913-14	43 records	26.2	35.6	.....	.....	.....	2.1	3.8	8.7	22.9	38.96	87.0	.45
Colorado:														
Montrose ¹	1913-14	19 records	35.8	13.5	7.3	.....	.....	3.0	5.3	11.0	22.3	82.27	258.0	.32
Greeley ¹	1913-14	1,802 acres	40.3	11.4	6.5	.....	.0	4.0	4.9	12.0	18.4	62.90	217.0	.29
Iowa:														
Eastern ¹	1913-14	22 records	40.3	13.3	16.1	.....	1.6	3.6	3.9	.....	21.2	55.43	174.0	.32
Grundy County ¹	1913-14	19 records	39.5	17.0	8.3	.....	1.0	4.4	4.1	.....	25.7	45.89	151.0	.30
Washington:														
Eastern ¹	1914-14	25 records	39.6	9.0	4.0	.....	.....	4.4	5.7	8.7	28.6	45.86	145.0	.32
Yakima ¹	1913-14	21 records	41.6	9.9	5.0	.....	.....	2.2	6.2	10.2	23.1	91.25	311.0	.29

¹ New York Department of Agriculture Bul. 86.² Mostly cost of cover crop.³ Includes small charge for cost of cover crop.⁴ U. S. Department of Agriculture Bul. 648.¹ Unpublished data in office files of U. S. Department of Agriculture² U. S. Department of Agriculture, Bureau of Statistics, Bul. 73.³ Minnesota Bul. 145.⁴ New York Bul. 377.

TABLE 473.—*Acres costs of production of sugar beets, with yield per acre and percentage analysis of cost factors.*

Region.	Date.	Basis.	Labor.	Anti- mal power.	Con- tract labor.	Total labor and animal power.	Equip- ment.	Seed.	Manure	Fer- tilizer	Taxes and insur- ance.	Over- head.	Land charge.	Water.	Total cost.	Yield.	Cost per ton ¹
		Acres.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.		Tons.	
Colorado:	1914-15	5,028.4				54.0	2.8	2.5	7.6		1.2	1.9	23.3	0.7	\$72.51	15.57	\$4.66
	1914-15	2,428.95				59.1	3.1	3.3	1.3		1.2	2.0	25.0	.8	84.86	12.99	4.99
	1915	2,455.5				56.9	4.4	3.3	3.3		1.6	2.0	25.0	.9	64.98	13.65	4.76
	1917	5,028.40			19.9	62.8	3.2	2.1	6.3		1.9	5.8	16.3	1.6	86.95	13.57	5.58
	1917	2,455.50			23.4	65.0	4.6	2.6	4.2		2.2	5.9	14.1	1.4	81.98	13.65	6.01
California:	1917	2,428.95			15.3	63.7	2.9	2.3	3.2		2.0	5.7	18.6	1.6	92.46	12.99	7.12
	1915-16	7,711.5				46.1	4.2	3.7	1.0		3.0	1.5	39.7	.8	67.11	14.52	4.62
	1915-16	2,811.0				52.4	4.6	3.6	1.6		3.6	1.7	32.5		54.88	9.33	5.76
Utah:	1915-16	3,616.0				53.6	4.9	3.5	7.4		1.6	1.8	31.9	2.3	66.45	15.59	4.26
	1915-16	1,401.0				58.2	4.9	3.2	5.3		1.7	2.1	23.3	1.3	69.03	14.85	4.65
Idaho:	1914-15	823.0				54.7	5.0	3.2	6.1		2.8	2.0	25.5	.7	151.59	14.96	4.65
	1918	303.5			6.6	63.0	6.2	1.4	6.5		1.3	7.8	12.4	1.4	151.59	16.1	9.41
	1918	766.0			18.7	62.0	6.6	1.5	3.9		1.0	7.0	17.3	.7	131.36	15.8	8.31
Michigan:	1915	735.0				56.3	6.4	3.4	5.6		2.7	2.0	21.2	2.4	62.68	13.62	4.60
	1918	892.3			17.8	56.8	7.6	1.6	5.3		1.1	9.3	17.3	1.0	113.41	13.1	8.81
	1919	687.03			22.6	54.2	5.3	1.7	2.5		2.7	6.1	15.2	2.3	133.39	10.9	12.51
Ohio:	1914-15	2,017.65				65.9	4.3	4.9	4.0		2.5	2.3	14.0		47.65	9.73	4.90
	1914-15	505.79				61.3	1.3	4.0	5.1		1.4	2.2	20.3		57.12	11.4	5.04
	1914-15	230.53				64.1	4.6	4.0	5.1		1.7	2.3	13.6		53.05	10.16	5.22
Montana:	1914-15	1,524.65				60.7	4.4	4.1	1.3		1.3	2.0	24.6		58.04	13.17	4.26
	1915	8,849.0			33.1	64.5	4.7	3.1	6.7				21.0		56.38	10.76	5.24

¹ Gross cost per ton. The value of beet tops usually runs from \$2 to \$3 per acre.² U. S. Department of Agriculture Bul. 726.³ U. S. Department of Agriculture Bul. 917.⁴ U. S. Department of Agriculture Bul. 760.⁵ U. S. Department of Agriculture Bul. 693.⁶ Includes a small charge for loss on abandoned acreage.⁷ U. S. Department of Agriculture Bul. 963.⁸ U. S. Department of Agriculture Bul. 748.⁹ U. S. Department of Agriculture Bul. 735.

TABLE 474.—Acre costs of production of tobacco, with yield per acre and percentage analysis of cost factors.

Region.	Date.	Num-ber of records.	Labor.	Animal power.	Labor and animal power.	Seed.	Equip-ment.	Manure and fertilizer.	Insur-ance.	Barns and stacks.	Other costs.	Land charge.	Total cost.	Yield.	Cost per unit.
Kentucky:															
Burley district ¹	1919	81	Per ct. 42.0	Per ct. 6.8	Per ct. 48.8	Per ct.	Per ct. 1.2	Per ct. 0.5	Per ct. 4.0	Per ct. 9.6	Per ct. 2 1.6	Per ct. 31.3	\$289.10	Pounds, 1,111	\$0.25
Dark district ¹	1919	70	Per ct. 49.5	Per ct. 12.5	Per ct. 62.0	Per ct.	Per ct. 1.9	Per ct. 3.5	Per ct. 4.4	Per ct. 7.1	Per ct. 2 3.3	Per ct. 17.8	141.76	825	.17
Wisconsin ²	1909-1918	19	Per ct. 45.3	Per ct. 15.4	Per ct. 60.7	Per ct. 1.2	Per ct. 3.9	Per ct. 10.0	Per ct.	Per ct. 11.8	Per ct. 4.5	Per ct. 7.9	61.00	1,300	.05

¹ Kentucky Bul. 229.² Includes canvas, spray material, wood and coal, seed and plants.³ Unpublished data in files of U. S. Department of Agriculture.

TABLE 475.—Acre costs of production of buckwheat, with yield per acre and percentage analysis of cost factors.

Region.	Date.	Acres.	Labor.	Animal power.	Labor and animal power.	Equip-ment.	Seed.	Twine.	Ma-nure.	Ferti-lizer.	Thresh-ing.	Over-head.	Land charge.	Total cost.	Yield per acre.	Cost per bushel.
New York ¹	1913	75.6	Per ct. 16.2	Per ct. 30.2	Per ct. 46.4	Per ct. 8.2	Per ct. 7.9	Per ct. 0.8	Per ct. 20.0	Per ct. 1.1	Per ct. 2.7	Per ct. 4.7	Per ct. 14.0	\$18.04	Bushels, 14.0	\$1.29
New York ¹	1914	59.5	Per ct. 23.4	Per ct. 34.9	Per ct. 58.3	Per ct. 8.4	Per ct. 7.3	Per ct. .4	Per ct. .8	Per ct. .4	Per ct. 0.4	Per ct. 0.4	Per ct. 18.6	15.68	18.7	.83

¹ New York Department of Agriculture Bul. 80.

TABLE 476.—Acre costs of production of grain sorghums (kafr and milo), with yield per acre and percentage analysis of cost factors.

Region.	Date.	Num-ber of records.	Labor.	Animal power.	Labor and animal power.	Seed.	Ma-nure.	Twine.	Thresh-ing.	Equip-ment.	Taxes and insur-ance.	Over-head.	Land charge.	Total cost.	Yield.	Cost per bushel.
Texas ¹	1917	40	Per ct. 50.8	Per ct. 28.2	Per ct. 50.0	Per ct. 0.9	Per ct. 14.7	Per ct. 0.6	Per ct. 4.0	Per ct. 18.6	Per ct. 2.4	Per ct. 4.6	Per ct. 22.9	\$15.74	Bushels, 20.8	\$0.76
Oklahoma ¹	1917	37	Per ct. 24.6	Per ct. 27.1	Per ct. 48.7	Per ct. .5	Per ct. 11.7	Per ct. 1.0	Per ct. 3.0	Per ct. 7.9	Per ct. 2.1	Per ct. 5.8	Per ct. 15.3	22.95	22.6	1.02
Kansas ¹	1917	19	Per ct. 18.7	Per ct. 20.1	Per ct. 38.8	Per ct. .5	Per ct. 27.2	Per ct. 2.0	Per ct. 3.0	Per ct. 8.8	Per ct. 1.7	Per ct. 6.2	Per ct. 11.8	33.72	23.2	1.45

¹ Unpublished data in files of U. S. Department of Agriculture.

TABLE 477.—Acre costs of production of apples, with yield per acre and percentage analysis of cost factors.

Region.	Date.	Rec-ords.	Main-ten-ance bor.	Hand-ling labor bor.	To-tal bor.	Ma-nure.	Per-centage liver.	Spray-ing ma-terials.	Con-tainers.	Seed.	Equip-ment.	Ap-ple-build-ing charge.	Tax.	In-sun-ance.	Wa-ter.	Over-head.	Land charge.	Total cost.	To-tal cred-its.	Net cost.	Yield.	Net cost per unit of yield.
<i>New York.</i>																						<i>Barsels.</i>
Wayne County 1...	1910-1915	44	16.9	20.5	40.4	6.1	3.3	4.7	15.6	1.3	2.5	4.5	1.5	0.3	.....	.....	19.8	\$126.24	\$23.58	\$102.66	73.2	\$1.40
Ontario County 1...	1910-1915	42	20.5	20.3	40.8	7.2	1.5	6.2	24.2	.8	3.2	1.4	1.4	.2	.....	.....	11.0	132.34	118.59	123.90	92.3	1.27
Montre County 1...	1910-1915	47	17.2	19.5	36.7	6.1	1.2	6.2	22.6	.8	2.6	1.1	1.7	.4	.....	.....	20.6	135.98	122.06	123.90	87.3	1.45
Oreanus County 1...	1910-1915	50	16.2	18.8	35.0	6.5	.5	7.6	22.0	.5	2.7	.3	1.3	.3	.....	.....	22.2	141.63	137.66	127.66	86.8	1.47
Niagara County 1...	1910-1915	35	19.5	20.4	39.9	5.5	.7	7.5	22.4	.5	3.1	.3	1.6	.3	.....	.....	18.2	130.45	126.96	119.69	81.4	1.47
Average, 5 counties 1	1910-1915	218	18.5	19.8	38.3	6.3	1.2	6.5	22.4	.8	2.8	1.5	1.7	.3	.....	.....	13.2	133.93	126.17	118.78	81.1	1.11
<i>Colorado.</i>																						<i>Barsels.</i>
Mesa County 2...	1914-1915	49	.....	.....	45.1	1.4	.....	6.1	14.7	.....	4.6	1.5	2.0	.3	0.8	.....	23.4	256.77	.....	.....	275	.....
Delta County 2...	1914-1915	61	.....	.....	47.0	2.7	.....	3.3	17.7	.....	3.1	2.3	1.4	.2	.8	.....	21.5	233.96	.....	.....	294	.....
Montrose County 2	1914-1915	15	.....	.....	51.0	3.3	.....	2.8	18.3	.....	4.0	1.9	1.2	.2	.6	.....	16.9	208.35	.....	.....	272	.....
Average, 3 counties 2	1914-1915	125	.....	.....	46.6	2.2	.....	4.4	16.6	.....	3.8	1.9	1.7	.2	.8	.....	21.8	239.79	.....	.....	284	.....
<i>Idaho.</i>																						<i>Barsels.</i>
Payette Valley 3...	1915	38	18.5	27.2	45.7	2.4	.....	5.4	21.3	.....	2.1	1.2	1.7	.1	.5	.....	19.6	250.89	11.24	239.65	337	.71
<i>Washington.</i>																						<i>Barsels.</i>
North Yakima 4...	1915	64	16.3	23.1	39.4	1.4	.....	2.6	16.9	.....	2.9	1.2	3.7	.3	.8	.....	30.8	397.91	8.27	389.64	462	.81
Zillah 4...	1915	56	23.0	28.9	51.9	2.8	.....	4.6	19.1	.....	2.7	1.3	2.3	.2	.3	.....	14.8	303.67	8.17	295.50	398	.74
Yakima Valley 4...	1915	120	19.0	25.4	44.4	2.0	.....	3.5	17.7	.....	2.9	1.2	3.1	.2	.6	.....	24.4	333.91	8.23	345.68	432	.80
Wanatchee Valley 5	1914	87	15.6	22.6	38.2	.7	.....	2.8	18.3	.....	2.1	1.4	2.8	.2	.1	.....	32.8	469.73	.....	.....	593	.....
<i>Oregon.</i>																						<i>Barsels.</i>
Hood River 6...	1915	54	18.7	21.3	40.0	1.0	.....	3.7	13.4	.1	2.8	1.4	3.5	.2	.7	.....	33.2	236.35	9.39	236.96	222	1.02
<i>Virginia.</i>																						<i>Barsels.</i>
Winchester area 7...	1916	20	.....	.....	42.5	.....	.9	1.8	10.1	.....	6.4	.....	.....	.....	.....	5.6	23.7	175.71	36.11	139.59	86	1.62
Winchester area 7...	1917	20	.....	.....	44.8	.....	.9	2.1	10.4	.....	7.3	.....	.....	.....	.....	6.9	27.6	134.01	51.17	82.84	33	2.50
Winchester area 7...	1918	20	.....	.....	45.2	.....	.8	2.0	20.4	.....	5.0	.....	.....	.....	.....	8.8	17.8	196.41	36.73	159.68	54	3.87
Winchester area 7...	1919	20	.....	.....	44.3	.....	1.6	2.4	10.2	.....	6.0	.....	.....	.....	.....	10.5	25.0	174.72	39.15	135.57	29.6	2.99
Winchester area 7...	1920	20	.....	.....	39.5	.....	2.0	1.7	27.1	.....	4.7	.....	.....	.....	.....	7.3	17.9	224.87	25.43	199.45	52.1	2.29
Average 7...	1916-1920	20	.....	.....	43.0	.....	1.3	2.1	18.3	.....	5.7	.....	.....	.....	.....	7.8	21.8	181.33	40.04	141.29	50.94	2.77

U. S. Department of Agriculture Bul. 416.

U. S. Department of Agriculture Bul. 551.

U. S. Department of Agriculture Bul. 518.

U. S. Department of Agriculture Bul. 636.

U. S. Department of Agriculture Bul. 614.

TABLE 478.—*Acres costs of production of hay, with yield per acre and percentage analysis of cost factors.¹*

Region.	Date	Acres	Kind of hay.	Labor.	Animal power.	Labor and animal power.	Equip-ment.	Seed.	Manure and fertilizer.	Over-head.	Land charge.	Total cost.	Yield.	Cost per ton.
New York ²	1914	1,306.5	Hay	Per ct. 13.9	Per ct. 13.3	Per ct. 27.2	Per ct. 3.7	Per ct. 8.0	Per ct. 19.9	Per ct. 41.2	Tons. 1.28	\$9.99	1.28	\$7.80
New York ³	1912	437.5	Timothy and clover	14.4	14.7	29.1	5.0	8.5	26.2	31.2	1.39	11.58	1.39	8.33
New York ³	1913	823.7	do.	15.9	13.0	28.9	4.5	9.4	24.6	32.5	1.44	11.30	1.44	7.85
Minnesota:														
Rice County ⁴	1902-1907	793.71	do.			29.8	8.9	4.7		56.6	2.28	6.18	2.28	2.71
Lyon County ⁴	1902-1907	240.20	do.			32.1	8.7	5.2		54.0	1.77	5.55	1.77	3.14
Norman County ⁴	1902-1907	417.35	do.			62.7	4.0	4.0		29.3	1.73	7.18	1.73	4.15
Rice County ⁴	1902-1907	70.39	Wild hay			31.6	10.4			58.0	2.28	6.01	2.28	2.65
Lyon County ⁴	1902-1907	511.08	do.			32.8	12.4			54.8	5.48	5.48	1.77	3.10
Norman County ⁴	1902-1907	586.10	do.			56.5	9.8			33.7	1.73	2.97	1.73	1.72
Rice County ⁵	1908-1912	685.43	Timothy and clover			33.2	10.9	3.8		10.3	1.61	10.76	1.61	6.68
Lyon County ⁵	1908-1912	574.63	do.			30.1	10.1	5.3		12.9	1.63	10.11	1.63	6.20
Norman County ⁵	1908-1912	1,495.91	do.			26.1	14.3			15.8	.95	7.74	.95	8.15
Rice County ⁵	1908-1912	9.82	Wild hay			21.3	13.8			4.4		8.16		
Lyon County ⁵	1908-1912	272.72	do.			18.8	14.4			11.9		5.52		
Norman County ⁵	1908-1912	40.00	do.			55.4	8.6			11.4		5.42		
Halstad ⁶	1913-1917	1,169.5	Timothy and clover			57.8	8.4			8.5		15.26	1.1	13.87
Cokato ⁶	1913-1917	231.04	do.			39.0	12.8			7.8		19.20	2.1	9.14
Halstad ⁶	1913-1917	127.34	Wild hay			26.5	5.6			7.1		10.22		
Wisconsin ⁷	1909-1918	707.77	Mixed hay			33.1	9.6			3.7		9.00	1.4	6.43
Wisconsin ⁷	1909-1918	303.00	Clover			22.8	9.0			1.5		11.12	2.2	5.05
Wisconsin ⁷	1909-1918	206.68	Timothy			22.8	9.0			8.7		10.83	1.4	7.74
Ohio ⁷	1910-1913	17.7	Mixed			15.1	15.1			.3		6.42		
Missouri ⁹	1910-1913	66.5	Clover			32.9	5.4			3.5		8.10		

¹ Charges for buildings and interest on current costs which appear in a few sources have been omitted.² Minnesota Bul. 179.³ Unpublished data in office files, U. S. Department of Agriculture.⁴ New York Bul. 377.⁵ Number of records.⁶ Missouri Bul. 125.⁷ U. S. Department of Agriculture, Bureau of Statistics, Bul. 73.⁸ Minnesota Bul. 145.

TABLE 479.—Cost per acre of producing various truck crops, with yield and cost per unit of yield.

Region.	Date.	Records.	Crops.	Labor.	Animal power.	Total labor and animal power.	Seed.	Plants.	Containers.		Fertilizer.	Spray material.	Equipment.	Water.	Tractor, truck, and auto.	Insurance and taxes.	Miscellaneous.	Land charge.	Total cost.	Yield.	Cost per unit of yield.	
									Kind.	Cost.												
Georgia. Brooks Co. ¹	1914	46	Watermelons	\$7.22	\$4.92	\$12.14	\$0.55				\$7.73		\$0.98						\$25.20	0.5 earload	\$50.40	
	1914	15	Sugar cane	36.30	14.12	50.51	10.91				7.12		2.88					3.94	\$3.45	\$3.22	307 gallons	.28
	1914	25	Sweet potatoes	13.30	3.14	18.44	2.16		Barrels	\$6.41	4.76		1.10							29.68	109 bushels	.27
Mississippi. Copiah Co. ²	1921	5	Beans	30.90	16.79	47.69	8.55		Hampers.	10.78	23.76		3.01						9.00	95.01	32 hampers	1.83
	1921	2	Carrots	46.95	12.93	59.88	11.63		do.	18.85	22.60		3.03						9.00	116.38	91 hampers	1.25
	1921	4	Peas	28.05	7.82	35.87	29.68		do.	20.00	\$2.18	26.96		3.18					9.00	116.26	100 hampers	1.16
Do. ³	1921	6	Cabbage	19.95	11.04	30.99	1.93		Crates	20.92	.19	25.72		2.49					9.00	62.13	90 crates	1.13
	1921	16	Tomatoes	47.25	13.37	60.62	2.28		do.	64.29	25.72		3.47						9.00	170.20	12 crates	.53
	1918	280	do	38.57	20.00	58.57	2.87		Baskets	5.06	14.29	20.08	\$0.91	6.17	\$3.95	\$0.21	2.95	9.27	10.26	623 tons	19.14	
New Jersey. ⁴	1919	280	do	33.59	16.38	50.07	.00	\$3.63	do.	2.60	15.07	20.08	7.8	3.18	\$2.85	\$0.21	2.95	10.24	118.38	2.03 tons	56.64	
	1920	205	do	49.10	16.33	65.43	.61	3.20	do.	3.13	16.28	18.71	5.63	5.83	\$6.41	6.41	2.95	11.30	155.62	5.74 tons	23.63	
	1920	16	Onions	84.30	17.61	101.91		43.02	Hampers.	32.03	36.76	37.79	8.1	5.83	\$2.70	2.70	1.11	143.89	11.30	1.53		
Do. ⁵	1920	10	do	80.40	17.00	97.40	15.00			13.00	3.00		7.40						9.25	116.95	200 bushels	.57
	1920	8	Cabbage	27.80	21.30	49.10	2.00			6.00			2.70					6.25	96.58	10.7 tons	6.22	
	1920	8	Cantaloupes	34.20	22.10	56.30	4.47			14			2.67					12.11	179.58	477 pounds	.17	
Colorado. ⁶	1917	13	Cucumbers	25.75	16.40	42.15	1.03		Crates	45.18			2.67	\$1.02					11.47	79.00	477 pounds	.17
	1917	16	Cucumbers	25.75	16.40	42.15	1.03			1.00			2.44	.96				18	5.20	5.3 tons	8.71	
	1913	4	Cabbage	14.31	10.41	24.72	1.19			6.25	4.93		2.88					.38	5.14	14.37	8.7 tons	4.99
New York. ⁷	1914	9	do	13.28	8.72	22.00	2.47			5.45	5.43		2.60						9.07	14.37	8.7 tons	4.99
	1914	9	do	13.28	8.72	22.00	2.47			28.15	17.81		3.47					.17	1.11	2,850 pounds	.05	
Ohio. ⁸	1920	131	Sweet corn	51.65	20.45	72.10	3.40															

1 U. S. Department of Agriculture Bul. 648.

2 Mississippi Cir. 39.

3 \$0.25, twine.

4 \$2.90, inte.

5 \$0.75, lumber; \$1.74, cloth; \$1.47, straw.

6 \$1.27, sash; \$3.85, sticks; \$1.32, lumber; \$3.23, cloth; \$1.66, lime; \$1.47, straw.

7 New Jersey Agri. Exp. Sta. Bul. 353.

8 \$0.12, tractor; \$1.13, truck.

9 \$0.99, cover crop seed; \$0.20, lime; \$1.76, interest at 6 per cent.

10 \$0.31, tractor; \$3.22, truck; \$0.32, auto.

11 \$1.19, hothead material; \$1.08, cover crop seed, \$1.60, lime; \$1.71, interest at 6 per cent.

12 \$0.92, tractor; \$5.20, truck; \$0.20, auto.

13 \$0.16, hothead material; \$1.01, cover crop seed; \$0.66, lime; \$0.03, hauling; \$2 interest at 6 per cent.

14 Unpublished data in files of U. S. Department of Agriculture.

15 Corn seeds.

16 \$0.01, tractor; \$2.69, truck.

17 U. S. Department of Agriculture Bul. 917.

18 \$12.77, contract labor.

19 \$0.10, contract labor.

20 Near York Department of Agriculture Bul. 86.

21 Monmouth 42, States Relations Service, Mar. 2, 1921.

22 A credit of \$11.11 per acre is figured for fodder and factory waste.

TABLE 480.—*Acres costs of production of flax, with yield per acre and percentage analysis of cost factors.*

Region	Date.	Acres.	Labor.	Animal power.	Labor and animal power.	Equip-ment.	Seed.	Twine.	Manure.	Thresh-ing.	Over-head.	Land charge.	Total cost.	Yield.	Gross cost per bushel. ¹
			Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.		Bushels	
Minnesota:															
Rice County ²	1902-1907	173.02	.....	.....	40.2	5.2	10.6	.....	.....	29.2	.....	34.8	\$10.07	12.07	\$0.83
Norman County ²	1902-1907	470.87	.....	.....	43.8	5.1	10.0	.....	.....	11.2	.....	28.9	7.27	9.19	0.79
Lyon County ²	1902-1907	186.06	.....	.....	33.3	4.0	9.0	.....	.....	13.8	.....	23.9	8.85	8.77	1.01
Norman County ²	1902-1907	343.77	.....	.....	43.8	4.8	11.2	.....	.....	10.3	.....	20.9	7.03	9.19	.77
Lyon County ²	1907-1907	59.88	.....	.....	33.2	6.7	9.4	.....	.....	12.9	.....	35.7	8.40	8.77	.96
Norman County ²	1902-1907	197.10	.....	.....	42.5	5.4	10.6	.....	.....	9.7	.....	30.4	6.90	9.19	.75
Lyon County ²	1908-1912	25.66	.....	.....	30.5	6.1	11.0	.....	.....	6.9	.....	27.7	14.42	7.52	1.92
Norman County ²	1908-1912	112.62	.....	.....	36.9	6.8	11.4	.....	.....	7.0	.....	31.1	9.65	7.03	1.37
Rice County ²	1908-1912	29.56	.....	.....	37.0	7.7	8.0	.....	.....	8.1	.....	34.2	13.15	10.42	1.26
Norman County ²	1908-1912	112.62	.....	.....	42.2	6.4	10.7	.....	.....	8.3	.....	29.1	10.30	7.03	1.47
Cokato ²	1911-1917	45.33	.....	.....	46.7	8.3	9.5	.....	.....	8.3	.....	26.3	18.99	10.0	1.90
North Dakota ¹⁰	1911-1916	.....	17.5	26.6	44.1	5.7	4.4	1.4	5.6	13.6	.....	20.1	11.64	7.9	1.47
Do. ¹⁰	1917	.....	16.7	26.4	43.1	5.7	10.3	1.5	8.0	17.0	.....	14.4	16.26	7.9	2.06

¹ Data on value of straw not available.² U. S. Department of Agriculture, Bureau of Statistics, Bul. 73.³ Windrow threshed.⁴ Stacked from windrow.⁵ Bound, shocked, and stacked.⁶ Minnesota Bul. 145.⁷ Stack threshed.⁸ Shock threshed.⁹ Minnesota Bul. 179.¹⁰ Unpublished data in office files, U. S. Department of Agriculture.

TABLE 481.—Acre costs of production of oats, with yield per acre and percentage analysis of cost factors.

Region.	Date.	Basls.	Labot.	Animal power.	Labor and animal power.	Ma- chine- ry.	Seed.	Twine.	Ma- nure.	Ferti- lizer.	Thresh- ing.	Over- head.	Water rent.	Land charge.	Total cost.	Yield per acre.	Cost per bushel.
Minnesota:																	
Rice County ¹	1902-1907	3,478.17 acres.															\$0.24
Rice County ²	1908-1912	1,701.72 acres.															.53
Rice County ³	1902-1907	3,478.17 acres ³															.22
Minnesota:																	
Lyon County ¹	1902-1907	1,551.80 acres.															.22
Lyon County ²	1908-1912	909.82 acres.															.30
Lyon County ³	1902-1907	1,551.80 acres ³															.19
Minnesota:																	
Norman County ¹	1902-1907	1,188.62 acres.															.25
Norman County ²	1908-1912	916.78 acres.															.31
Norman County ³	1909-1918	1,067.25 acres.															.37
Wisconsin:																	
Illinois ⁴		48 records.															.42
North Dakota ⁵		53 records.															.26
New York ⁶	1912	107 acres.															.90
New York ⁶	1913	471.3 acres.															.62
New York ⁶	1914	36.9 acres.															.87
Missouri ⁷	1910-1913	160 acres.															.87
Missouri ⁸	1914	49 records.															.43
South Carolina ⁹	1914	943.2 acres.															.43
Colorado:																	
Greeley County ¹⁰	1917	184.50 acres.															.60
Fort Morgan ¹⁰	1917	144 acres.															1.04
Rocky Ford ¹⁰	1917	75 acres.															.50

¹ U. S. Department of Agriculture, Bureau of Statistics, Bul. 73.

² Minnesota Bul. 145.

³ On disked corn stubble.

⁴ Unpublished data in files of U. S. Department of Agriculture.

⁵ New York Bul. 377.

⁶ New York Department of Agriculture Bul. 80.

⁷ Missouri Bul. 125.

⁸ U. S. Department of Agriculture Bul. 618.

⁹ U. S. Department of Agriculture Bul. 651.

¹⁰ U. S. Department of Agriculture Bul. 917.

NOTE.—The Crop Reporter for June, 1911, gives the results of an investigation on the cost of producing oats, which data have not been used in the above tabulation.

TABLE 482.—Acre costs of production of beans, with yield per acre and percentage analysis of cost factors.

Region.	Date.	Basis.	Labor.	Animal power.	Labor and animal power.	Equip-ment.	Seed.	Ma-nure.	Ferti-lizer.	Over-head.	Land charge.	Thresh-ing.	Con-tain-ers.	Water.	Total cost.	Cred-its.	Net cost.	Yield.	Cost per bushel.
Colorado:		Acre.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	\$50.84	(*)		Bush	
Greeley 1.	1918	871.30	20.8	19.2	40.0	4.6	5.5	1.9	.....	6.9	31.4	7.6	2.1	2.0	75.86	(*)		24.3	.....
Rocky Ford 1.	1918	174.50	29.3	17.9	47.2	3.5	6.7	2.6	.....	7.2	23.6	5.7	2.1	1.4	75.86	(*)		26.9	.....
New York 2.	1917	540.00	21.5	21.0	42.5	4.7	13.3	6.6	2.0	19.3	9.2	2.4	.....	.....	58.50	\$4.47	\$51.03	10.9	\$4.96
Michigan 3.	1917	194.00	22.6	17.2	39.8	5.7	16.9	2.7	.9	15.8	15.1	3.1	.....	.....	43.07	3.46	40.21	10.5	3.83
Wisconsin 4.	1917	184.00	19.0	15.8	31.8	6.9	23.2	9.4	.1	8.3	14.4	2.9	.....	.....	42.57	3.73	38.84	7.3	3.52
California:																			
Irrigated 5.	1917	805.00	18.9	12.5	31.4	3.6	2.9	.7	.....	6.7	40.5	8.6	3.5	2.1	59.37	3.43	55.94	20.7	2.70
Nonirrigated 5.	1917	1,433.00	11.4	13.0	24.4	4.6	11.7	.....	.....	10.7	39.8	6.9	1.9	.....	89.77	4.84	84.93	26.5	3.30
Colorado:																			
Irrigated 6.	1917	450.00	21.5	20.9	42.4	5.5	6.0	2.7	.....	8.1	26.7	6.4	.....	2.2	64.08	5.71	58.97	25.0	2.36
Nonirrigated 6.	1917	502.00	30.2	27.7	57.9	7.0	7.7	.....	.....	12.3	8.2	6.9	.....	.....	21.39	2.08	19.31	6.8	2.84
† New Mexico:																			
Nonirrigated 7.	1917	1,850.00	34.5	29.4	63.9	6.1	10.0	.....	.....	7.2	7.9	2.5	2.4	.....	20.35	1.37	18.98	4.1	4.63
Idaho:																			
Nonirrigated 8.	1917	864.00	23.2	27.3	52.5	5.0	8.3	.....	.....	7.6	21.2	4.1	1.3	.....	35.94	2.19	33.75	9.7	3.48

1 U. S. Department of Agriculture Bul. 917.

2 No credits obtainable.

3 Unpublished data in files of U. S. Department of Agriculture.

TABLE 483.—Acre costs of production of silage, with yield per acre and percentage analysis of cost factors.

Region.	Date.	Basis.	Labor.	Animal power.	Labor and animal power.	Equip-ment.	Seed.	Twine.	Manure.	Ferti-lizer.	Over-head.	Land charge.	Total costs.	Yield.	Cost per ton.
New York 1.	1912	101.0	19.8	28.9	49.7	16.0	2.4	.....	.....	19.9	1.3	10.7	\$29.59	Tons.	\$3.69
Do. 1.	1913	262.8	52.1	27.9	50.0	14.4	2.9	.....	.....	20.6	1.2	10.9	31.07	8.01	4.32
Do. 2.	1914	225.0	19.9	27.9	47.8	13.1	2.8	1.1	.....	17.8	4.0	12.2	30.89	6.31	4.29
Minnesota:															
Experiment station 3.	1905-1907	115.5	.....	.....	44.3	31.4	2.4	3.2	.....	.....	.....	18.7	18.06	10.84	1.72
Rice County 4.	1908-1912	312.6	.....	.....	48.4	17.3	5.4	1.8	.....	.....	4.5	22.6	19.95	.....	.....
Norman County 4.	1908-1912	281.6	.....	.....	50.3	18.2	3.4	2.0	.....	.....	7.4	16.7	18.01	.....	.....
Wisconsin 5.	1909-1918	648.36	24.1	24.9	49.0	12.5	2.5	1.2	14.0	.....	.....	20.8	22.44	7.0	3.21
New York 6.	1915	706.33	20.9	18.4	39.3	10.2	2.0	.9	.....	27.9	5.7	14.0	42.36	12.97	3.27
Wisconsin 6.	1915	1,226.96	16.6	18.6	35.2	9.8	1.4	1.1	.....	22.2	6.1	24.2	31.76	9.45	3.36
Iowa 7.	1915	578.6	16.8	19.4	36.2	12.3	1.5	1.2	.....	11.3	4.9	32.6	28.36	9.76	3.01

1 New York Bul. 377.

2 U. S. Department of Agriculture Bul. 86.

3 U. S. Department of Agriculture, Bureau of Statistics, Bul. 73.

4 Minnesota Bul. 145.

5 Unpublished data in files of U. S. Department of Agriculture.

Region.	Year.	Interest.	Depreciation.	Cost of bull.	Total other costs.	All costs.	Credits.			Net costs.	Average pounds of milk.	Net cost per 100 pounds of milk.
							Manure.	Calves.	Miscellaneous.			
Massachusetts ¹	1916-17	\$4.09	\$12.73	\$3.09	\$33.66	\$218.21	\$17.82	\$7.91	\$7.17	\$185.31	6,760	\$2.74
Do. 1916		4.90	6.91	3.40	42.85	186.38	16.69	5.39	7.51	176.88	5,500	2.55
Pennsylvania ²	1910-1913	2.07	5.13	1.47	24.59	103.19	10.27	1.16	.84	90.92	5,348	1.70
Maryland ³	1919	6.55	1.70		46.60	247.92				213.53	6,074	3.22
Wisconsin ⁴	1909-1912	2.70		1.92	20.15	101.57	10.47	4.75	.16	86.19	5,340	1.64
Do. 5.	1920	13.15	9.90		39.42	292.22	21.25			240.97	7,300	3.30
Minnesota												
Northfield ⁷	1905-1909	2.34	3.19	1.98	13.83	60.02					5,252	
Marshall ⁷	1906-1909	1.51	.36	2.08	9.37	46.19					4,113	
Hastad ⁷	1904-1909	1.51	.30	2.42	10.75	49.03					4,132	
Northfield ⁸	1908-1912			4.00	39.96	159.43	20.00	5.00		134.43	5,510	2.43
Hastad ⁸	1912-1916			4.00	34.36	147.83	20.00	5.00		122.83	4,849	2.55
Cokato ⁸	1913-1916			4.00	35.13	145.43	20.00	3.00		120.43	4,944	2.44
Nebraska												
Winter season ¹⁰	1917-1920	3.93	2.38	4.64	25.49						2,938	
Summer season ¹⁰	1917-1920	3.96	2.40	3.55	25.64						2,885	
Entire year ¹⁰	1917-1920	7.89	4.78	8.19	51.13						5,823	
Washington												
Winter season ¹¹	1917-1920	3.62	2.30	2.44	18.00						3,217	
Summer season ¹¹	1917-1920	3.60	2.29	1.94	13.31						4,613	
Entire year ¹¹	1917-1920	7.22	4.59	4.38	36.31						7,833	
Louisiana												
Winter season ¹²	1918-1920	2.95	2.92	1.08	15.97						1,309	
Summer season ¹²	1918-1920	2.72	2.69	.66	14.43						1,797	
Entire year ¹²	1918-1920	5.67	5.61	1.74	30.40						3,106	
North Carolina												
Winter season ¹³	1915-1917	2.02		1.75	13.30		7.98	3.00	2.62	13.58	2,478.6	
Summer season ¹³	1915-1917	1.83		1.50	12.07		5.38	2.72	2.38	10.43	2,437.7	
Entire year ¹³	1915-1917	3.85		3.24	25.37		13.34	5.72	5.00	21.06	4,916.3	
North Carolina ²	1908-1914	5.72	3.52	3.52	30.66	127.76					5,142	
Indiana												
Winter season ¹⁴	1915-1917	2.55	.60	2.32	13.67						3,540	
Summer season ¹⁴	1915-1917	2.57	.60	1.97	13.39						3,397	
Entire year ¹⁴	1915-1917	5.14	1.20	4.29	27.11						6,937	
New Jersey												
Sussex County ¹⁵	1921	8.28	11.04	4.43	63.99	230.38	12.00	14.59		203.79	6,490	3.14
South Jersey ¹⁵	1921	8.52	11.36	7.13	92.20	275.66	26.40	11.39		237.87	7,316	3.15
Michigan ¹⁶	1909-1912	3.22	.99	2.87	21.59	125.40	15.42	4.52	.38	105.05	6,586	1.61

¹ Massachusetts Ext. Bul. 19.² Includes insurance, taxes, risk, and managerial charges.³ U. S. Department of Agriculture Bul. 501.⁴ Preliminary Report on Cost of Producing Milk in Northern Maryland.⁵ Includes insurance, taxes, veterinary fees, cow testing, disinfectants, registration, and transportation costs.⁶ Minnesota Bul. 173.⁷ C. S. Department of Agriculture, Bureau of Statistics, Bul. 58.⁸ Includes interest, insurance, taxes, depreciation, and managerial charges.⁹ Unpublished data in files of the U. S. Department of Agriculture.¹⁰ U. S. Department of Agriculture Bul. 972.¹¹ U. S. Department of Agriculture Bul. 919.¹² U. S. Department of Agriculture Bul. 955.¹³ North Carolina Department of Agriculture Bul. 266.¹⁴ U. S. Department of Agriculture Bul. 858.¹⁵ "New Jersey Agriculture," Oct., 1921.¹⁶ Managerial charges, taxes, insurance, etc.

TABLE 485.—Yearly feed, bedding, and man and horse labor requirements per cow in dairy herd.¹

Region.	Year.	Labor.	Animal power.	Concentrates.			Roughage.				
				Purchased.	Home grown.	Total.	Dry.	Succulent.		Total.	Bedding.
								Silage.	Other.		
		Hrs.	Hrs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Massachusetts.....	1916-1917	185	17	.....	.....	2,662	4,075	7,817	.....	11,892	.....
Do.....	1916	150	9	.....	.....	2,430	4,379	5,954	.....	10,363	.....
Pennsylvania.....	1919-1913	170	21	.....	.....	1,423	2,308	8,311	.....	10,619	.....
Maryland.....	1919	201.3	29.6	1,747	512	2,259	4,848	6,320	.....	11,168	.....
Wisconsin.....	1909-1912	214	83	.....	.....	1,605	1,907	7,681	.....	8,988	.....
Do.....	1920	.....	.....	1,100	990	2,090	2,440	7,590	395	10,625	.....
Minnesota:											
Northfield.....	1905-1909	132.7	35.1	326	538	864	.....	5,390	.....	5,390	.....
Marshall.....	1906-1909	92.4	22.4	209	789	998	.....	4,028	.....	4,028	.....
Halstad.....	1904-1909	137.2	17.4	46	722	768	.....	5,731	.....	5,731	.....
Northfield.....	1908-1912	145	40	.....	.....	1,058	3,917	4,020	.....	7,937	.....
Halstad.....	1912-1916	160	17	.....	.....	866	4,843	2,903	.....	7,826	.....
Cokato.....	1913-1916	132	34	.....	.....	1,119	3,972	.....	.....	3,972	.....
Nebraska:											
Winter season...	1917-1920	58.2	1.9	129	1,082	1,211	2,798	2,749	.....	5,547	325
Summer season...	1917-1920	55.4	2.3	31	284	315	1,477	844	.....	2,321	15
Entire year.....	1917-1920	113.6	4.2	163	1,366	1,529	4,275	3,593	.....	7,868	340
Washington:											
Winter season...	1917-1920	60.1	.29	711	235	946	2,990	4,610	.....	7,600	289
Summer season...	1917-1920	60.9	.67	214	27	241	316	1,864	.....	2,210	6
Entire year.....	1917-1920	121	1.00	925	262	1,187	3,306	6,474	.....	9,810	295
Louisiana:											
Winter season...	1918-1920	75.3	11.6	927	22	949	503	1,026	.....	1,529	4
Summer season...	1918-1920	89.2	12.1	929	5	944	35	145	.....	180	.....
Entire year.....	1918-1920	164.5	23.7	1,866	27	1,893	538	1,171	.....	1,709	4
North Carolina:											
Winter season...	1915-1917	173.2	44	1,394	40	1,434	1,945	4,490	.....	6,444	.....
Summer season...	1915-1917	163.1	42.7	1,161	19	1,180	899	2,121	.....	3,020	.....
Entire year.....	1915-1917	336.3	86.7	2,555	59	2,614	2,844	6,620	.....	9,464	.....
North Carolina:	1908-1914	262	55	.....	.....	2,320	4,298	3,867	.....	8,165	.....
Indiana:											
Winter season...	1915-1917	90.1	8.9	707	659	1,366	2,365	5,224	.....	7,589	720
Summer season...	1915-1917	74.4	7.4	491	187	678	930	2,042	.....	2,972	.....
Entire year.....	1915-1917	164.5	16.2	1,198	848	2,046	3,301	7,276	.....	10,577	720
New Jersey:											
Sussex County...	1921	182.6	20.1	.....	.....	2,577	3,832	2,075	.....	5,907	.....
South Jersey....	1921	202	16.3	.....	.....	2,597	3,394	6,392	.....	9,788	.....
Michigan.....	1909-1912	230	32	.....	.....	2,855	3,683	11,638	.....	14,301	.....

¹ For number of cows and production per cow, see Table 484 (yearly cost, production, and value of by-products per dairy cow).

TABLE 486.—Quantities of feed and labor used in the production of 100 pounds gain on beef cattle in the feed lot.

2-YEAR-OLD STEERS.

State.	Year.	Number.		Man labor.	Hrs.	Animal power.	Total gain.	Corn.	Oats.	Barley.	Cottonseed meal.	Linseed-oil meal.	Molasses.	Miscellaneous concentrates.	Total concentrates.	Clover hay.	Alfalfa hay.	Timothy hay.	Mixed hay.	Wild hay.	Fodder.	Straw.	Total dry roughage.	Silage.	Total roughage.	Acres stalks.	Acres slover.	Pasture days.	
		Doves.	Cattle.																										
Burt County, Nebr.	1916-17	44	1,264	3.1	3.9	270	788	3	...	...	...	...	...	...	...	...	...	...	572	...	...	122	694	28	729	...	10	...	7
Pottawattamie County, Iowa.	1916-17	32	1,138	2.2	2.5	300	842	3	...	...	...	...	...	12	26	...	...	...	389	...	...	72	661	66	527	...	09	...	9
Eastern Iowa.	1916-17	20	1,177	3.0	4.1	205	439	23	...	...	...	...	...	...	12	...	...	...	237	...	...	60	797	1,072	1,160	...	23	...	33
Clinton County, Mo.	1916-17	26	2,777	3.3	5.4	359	848	4	...	...	...	...	93	...	129	...	...	...	118	...	...	50	166	...	164	...	02	...	39
Saline County, Mo.	1916-17	28	2,695	2.9	4.8	271	645	15	...	...	...	...	...	...	91	...	...	...	95	...	...	128	223	...	1,074	...	35	...	35
Carroll County, Mo.	1916-17	8	490	2.7	3.9	325	675	...	...	...	...	113	43	...	156	...	...	...	382	...	...	17	399	120	...	...	03	...	30

YEARLINGS—(ALL PURCHASED).

Burt County, Nebr.	1916-17	13	360	3.2	2.6	293	822	10		3				3			482			132	614		614		10		6
Pottawattamie County, Iowa.	1916-17	13	472	2.2	2.6	363	706	1		6	26	2		34			410			85	195	236	731	01	01		6
Eastern Iowa.	1916-17	9	263	3.1	1.9	381	235	22		40				40			281			235	516	376	1,082	33	03	33	
Missouri.	1916-17	12	489	2.8	3.6	360	654	9		42	51			96			289			18	307	102	409	22	08	40	

BABY BEEF—(ALL PURCHASED).

Nebraska.	1916-17	15	154	3.2	3.4	302	555	117	6	6	401	56	550	1
Iowa.	1916-17	10	250	2.4	3.6	340	519	29	40	39	352	50	402	122
Missouri.	1916-17	8	431	5.3	2.6	437	369	72	91	25	117	24	150	130

TABLE 486.—Quantities of feed and labor used in the production of 100 pounds gain on beef cattle in the feed lot—Continued.

CATTLE OF ALL AGES.

Statc.	Year.	Number.		Man labor.	Animal power.	Total gain.	Corn.	Oats.	Barley.	Cottonseed meal.	Linseed-oil meal.	Molasses.	Miscellaneous con- centrates.	Total concentrates.	Clover hay.	Alfalfa hay.	Timothy hay.	Mixed hay.	Wild hay.	Fodder.	Straw.	Total dry rough- age.	Silage.	Total roughage.	Acres stalks.	Acres stover.	Pasture days.
		Droves.	Cattle.																								
Nebraska.	1918-19	70	2,293	4.8	3.9	295	606	40	11	4	1	16	49	318	50	70	3	272	732	137	929	13	13	13	13	13	13
	1918-19	81	3,996	3.3	2.8	272	815	18	20	15	18	38	7	78	86	72	9	23	3	121	160	474	471	945	11	11	11
	1918-19	72	2,668	6.9	4.0	295	462	18	43	42	35	4	41	81	95	18	5	108	3	830	1,120	1,756	2,876	1,120	1,756	2,876	
	1918-19	49	1,510	4.6	1.2	344	391	14	1	79	3	41	23	146	32	6	1	38	29	287	442	1,510	1,510	1,510	9	9	9
	1918-19	50	3,473	3.9	5.3	268	297	18	1	83	26	43	26	178	10	58	1	41	73	135	908	1,226	908	1,226	50	50	50
Nebraska.	1919-20	125	3,837	2.9	2.1	270	754	19	1	1	4	1	1	5	81	366	2	33	13	3	201	699	98	797	18	18	18
	1919-20	113	4,294	2.6	2.2	320	808	18	1	1	15	1	1	19	43	116	3	80	7	31	80	394	373	767	17	17	17
	1919-20	108	4,007	5.7	3.1	247	573	2	1	36	23	15	1	74	168	18	13	110	49	859	1,219	2,426	3,645	10	10	10	
	1919-20	97	3,016	4.8	1.5	290	552	7	1	41	2	9	11	63	60	5	9	35	127	315	581	1,471	2,052	11	11	11	
	1919-20	100	5,184	3.5	3.6	257	518	8	1	15	30	14	2	61	87	64	6	21	99	120	397	381	778	44	44	44	
Nebraska.	1920-21	95	2,827	3.0	2.1	309	856	9	1	1	3	1	1	3	51	311	43	37	2	222	699	38	737	11	11	11	
	1920-21	134	5,344	2.3	1.5	353	891	18	1	2	3	9	1	14	74	138	5	26	15	117	375	79	454	19	19	19	
	1920-21	96	3,632	4.8	2.9	238	590	5	1	31	17	4	1	55	65	17	7	117	139	653	908	1,771	2,769	11	11	11	
	1920-21	89	2,899	5.0	2.1	270	671	12	1	40	1	1	1	42	63	5	1	31	241	322	665	1,260	1,931	14	14	14	
	1920-21	105	5,139	3.1	3.2	312	707	2	1	31	4	3	10	48	124	21	1	25	104	53	328	513	841	38	38	38	
Missouri.	1920-21																										

Data on 2-year old steers, yearlings, and baby beef, taken from Meat Packing Industry, Part VI, of the Federal Trade Commission.

Data on cattle since 1918-19 from unpublished material of the United States Department of Agriculture.

TABLE 487.—Cost of fattening cattle in sections of the Corn Belt.

[Per head feed lot costs.]
2-YEAR-OLD CATTLE.

State.	Winter.	Droves.	Cattle.	Feeding period (days).	Daily gain (pounds).	Feed.	Labor.	Buildings and equipment.	Risk.	Veterinary.	Insurance.	Taxes.	Incidentals.	Miscellaneous.	Interest.	Marketing expense.	Total cost.	Manure.	York.	Total credit.	Net cost.	Average gain (pounds).	Net cost per 100 pounds.
Burt County, Nebr.	1916-17	44	1,264	133	2.03	\$48.36	\$3.11	\$2.57	.....	.....	.....	.....	.....	\$1.31	\$2.48	\$2.04	\$59.87	\$2.34	\$8.28	\$10.62	\$49.25	270	\$18.24
Pott. County, Iowa.	1916-17	32	1,138	134	2.24	54.45	2.43	2.69	.....	.....	.....	.....	.....	1.01	2.78	1.87	65.25	1.54	9.15	10.69	54.56	300	18.19
Eastern Iowa.	1916-17	20	1,177	201	1.31	48.77	2.75	2.79	.....	.....	.....	.....	.....	1.07	3.32	2.99	61.69	2.94	4.42	7.36	54.33	265	20.50
Clinton, Mo.	1916-17	26	2,777	264	1.36	55.94	4.63	1.75	.....	.....	.....	.....	.....	1.78	5.61	2.28	101.31	.06	17.91	17.97	53.34	359	23.21
Saline County, Mo.	1916-17	28	2,685	208	1.30	52.75	3.80	1.97	.....	.....	.....	.....	.....	1.37	3.69	2.65	66.23	.35	8.49	8.54	57.39	271	21.18
Carroll County, Mo.	1916-17	8	490	201	1.61	50.76	2.43	1.90	.....	.....	.....	.....	.....	.70	3.49	2.52	61.80	.61	10.47	11.08	50.72	325	15.61
YEARLINGS.																							
Burt County, Nebr.	1916-17	13	360	158	1.90	\$52.04	\$2.74	\$2.32	.....	.....	.....	.....	.....	\$2.06	\$2.51	\$1.90	\$53.57	\$2.61	\$11.79	\$14.40	\$48.97	293	\$16.71
Pott. County, Iowa.	1916-17	13	472	193	1.90	64.31	2.97	2.74	.....	.....	.....	.....	.....	1.46	3.24	1.83	76.55	1.82	12.28	14.10	62.45	363	17.20
Eastern Iowa.	1916-17	9	206	293	1.30	54.67	3.32	4.04	.....	.....	.....	.....	.....	1.02	4.12	1.64	69.71	4.39	3.90	8.39	61.42	381	16.12
Missouri.	1916-17	12	459	251	1.40	52.46	3.47	1.63	.....	.....	.....	.....	.....	.82	3.48	2.03	63.89	.32	12.02	12.34	51.55	360	14.32
BABY BEEVES.																							
Nebraska	1916-17	15	454	181	1.70	\$46.10	\$3.45	\$2.44	.....	.....	.....	.....	.....	\$0.84	\$2.32	\$1.75	\$36.90	\$1.50	\$6.44	\$7.91	\$48.96	302	\$16.21
Iowa.	1916-17	10	230	187	1.80	52.24	2.51	2.10	.....	.....	.....	.....	.....	.62	2.12	2.06	61.65	1.55	7.07	8.02	51.03	340	15.60
Missouri.	1916-17	8	431	307	1.40	56.40	3.35	1.75	.....	.....	.....	.....	.....	.88	3.54	3.04	68.96	.44	5.54	5.98	62.98	437	14.41

TABLE 487.—Cost of fattening cattle in sections of the Corn Belt—Continued.

[Per head feed lot costs.]

ALL AGES.

State.	Winter.	Droves.	Cattle.	Feeding period (days).	Daily gain (pounds).	Feed.	Labor.	Buildings and equipment.	Risk.	Veterinary.	Insurance.	Taxes.	Incidentals.	Miscellaneous.	Interest.	Marketing expense.	Total cost.	Manure.	Pork.	Total credit.	Net cost.	Average gain (pounds).	Net cost per 100 pounds.
Nebraska.....	1918-19	70	2,293	176	1.68	\$79.09	\$7.01	\$1.74	\$0.42	\$0.14	\$0.04	\$0.13	\$0.51	.....	\$3.97	\$2.20	\$95.94	\$3.37	\$14.46	\$17.83	\$78.11	295	\$26.48
Iowa.....	1918-19	81	3,996	155	1.75	83.19	4.62	1.41	.63	.12	.06	.28	.77	.....	3.80	2.58	97.08	3.28	14.64	17.92	79.14	272	29.10
Illinois.....	1918-19	72	2,668	186	1.50	84.57	9.19	2.64	.32	.09	.04	.99	.63	.....	4.97	2.29	105.73	10.53	11.75	22.31	83.42	295	28.28
Indiana.....	1918-19	49	1,540	183	1.88	75.52	5.94	2.58	.74	.14	.15	1.76	.66	.....	5.19	1.58	94.36	5.66	11.55	17.21	77.05	314	22.40
Missouri.....	1918-19	50	3,473	161	1.66	56.91	4.89	.66	.92	.16	.25	.16	.23	.....	3.40	2.07	70.25	.24	6.78	7.02	63.23	268	23.59
Nebraska.....	1919-20	125	3,857	156	1.73	66.84	3.80	1.48	.33	.05	.....	.16	.45	.....	4.06	2.44	79.01	4.61	10.23	14.84	61.77	270	24.99
Iowa.....	1919-20	113	4,294	184	1.80	82.30	4.13	1.79	.40	.04	.14	.56	.31	.....	4.50	2.98	97.15	4.97	16.30	21.27	73.85	326	23.28
Illinois.....	1919-20	108	4,607	170	1.45	84.08	6.68	1.95	.41	.07	.03	.77	.64	.....	4.33	2.23	101.19	12.25	6.91	19.16	82.63	317	33.21
Indiana.....	1919-20	97	3,016	183	1.58	76.09	5.98	2.21	.78	.13	.07	.81	.54	.....	5.13	2.70	94.44	10.14	11.06	21.50	73.21	290	25.26
Missouri.....	1919-20	100	5,184	196	1.34	65.71	4.67	.70	.52	.08	.02	.28	.80	.....	3.55	2.96	78.88	1.98	8.22	10.20	68.68	262	26.21
Nebraska.....	1920-21	95	2,827	168	1.86	34.17	4.29	1.39	.41	.06	.01	.16	.61	.....	4.53	1.88	50.51	1.80	5.64	7.44	43.07	309	13.94
Iowa.....	1920-21	134	5,534	194	1.83	36.89	3.30	1.16	.57	.04	.08	.31	.35	.....	4.45	4.79	52.17	2.08	7.06	9.14	43.03	353	12.19
Illinois.....	1920-21	96	3,652	174	1.48	38.17	5.73	1.19	.30	.07	.01	.54	.44	.....	5.29	2.81	54.35	5.09	2.89	7.89	46.46	274	14.48
Indiana.....	1920-21	89	2,899	168	1.63	34.06	5.22	1.73	1.04	.06	.01	.61	.45	.....	4.36	2.88	50.52	4.76	2.52	10.88	40.44	270	14.98
Missouri.....	1920-21	103	5,139	252	1.40	50.19	4.65	.37	.69	.02	.03	.49	.27	.....	4.38	.59	60.08	.68	5.69	6.37	66.31	342	17.63

Data on 2-year-old cattle, yearlings, and baby beef taken from Meat Packing Industry, Part VI of the Federal Trade Commission.

Data on cattle since 1918-19 from unpublished material of the United States Department of Agriculture.

TABLE 488.—*Relative importance of each item of cost of keeping work stock.*

Cost Items.	New York, western.	Ohio.			Indiana.	
		Scattered farms.	Madison County.	Seneca County.	Madison County.	Montgomery County.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Feed and bedding.....	55.8	53.5	70.9	72.0	72.0	70.3
Chores.....	13.5	19.1	8.1	10.2	8.8	9.4
Depreciation.....	11.5	12.0	8.3	6.7	6.9	8.1
Interest.....	3.8	4.0	2.7	2.2	2.3	2.7
Subtotal.....	84.6	88.6	90.0	91.1	90.0	90.5
Shoeing.....	2.8	1.6	1.6	1.7	1.6	1.3
Stabling.....	7.8	5.0	5.3	4.6	5.2	5.6
Use of equipment.....	3.5	3.5	2.8	2.3	2.6	2.0
Miscellaneous.....	1.3	1.3	.3	.3	.6	.6
Total.....	100.0	100.0	100.0	100.0	100.0	100.0

Cost items.	Illinois.			Iowa, Iowa County.	Minnesota.		Wisconsin, southern.
	West Central.	Liv- ingston County.	Knox County.		Southern	Steele County.	
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Feed and bedding.....	59.6	73.1	73.8	67.2	69.4	69.4	59.7
Chores.....	12.1	7.9	8.0	8.4	11.4	11.5	13.4
Depreciation.....	13.7	8.3	7.4	9.5	10.7	7.8	11.0
Interest.....	4.5	2.7	2.4	3.2	3.5	2.5	3.6
Subtotal.....	89.9	91.0	91.6	88.3	88.0	91.2	87.7
Shoeing.....	.7	.7	.8	.4	.4	.5	3.1
Stabling.....	4.3	4.5	4.4	7.2	6.2	4.5	6.2
Use of equipment.....	3.3	2.8	2.7	2.7	4.1	2.7	2.5
Miscellaneous.....	1.8	1.0	.5	1.4	1.3	1.1	.5
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 489.—*Kinds of feed and average amounts of each per horse.*

State and district.	Grain.			Roughage.				Amounts of pasture.
	Corn.	Oats.	Miscellaneous.	Hay.	Straw.	Corn stover.	Miscellaneous.	
	<i>Bushels</i>	<i>Bushels</i>	<i>Pounds</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Days.</i>
New York, western.....	8.8	41.8	680	3.41	1.35	0.03	0.05	48
Ohio:								
Scattered.....	26.5	53.1	158	2.09	.76	.45	.03	68
Madison County.....	39.2	5.0	.....	1.63	.13	3.90	.....	172
Seneca County.....	37.4	29.2	.....	2.72	.12	1.59	.....	112
Indiana:								
Madison County.....	37.0	13.5	.....	1.66	1.04	.33	.....	169
Montgomery County.....	36.2	23.4	.....	1.54	.98	.17	.....	168
Illinois:								
West Central.....	57.2	39.8	28	.77	1.11	.22	.02	148
Livingson County.....	39.9	29.2	.....	.47	2.49	.03	.....	196
Knox County.....	38.3	24.4	.....	1.15	1.23	.06	.....	196
Iowa, Iowa County.....	48.3	69.2	.....	2.96	.57	.....	.....	104
Minnesota:								
Southern.....	14.7	78.0	353	3.29	.....	.13	.....	86
Steele County.....	32.1	45.5	71	2.08	.....	.43	.02	45
Wisconsin, southern.....	16.4	79.2	602	1.95	.73	.17	.21	63

TABLE 490.—*Average chore hours of man and horse labor per horse and per farm.*

State and district.	Average number of horses per farm.	Hours per horse.		Total hours per farm.	
		Man	Horse	Man	Horse
New York, western.....	4.84	127	8	615	39
Ohio:					
Scattered.....	4.59	165	8	742	36
Madison County.....	5.25	62		512	
Seneca County.....	4.78	90		430	
Indiana:					
Madison County.....	4.82	66		315	
Montgomery County.....	6.04	66		399	
Illinois:					
West Central.....	8.56	65	13	728	111
Livingston County.....	8.45	56		473	
Knox County.....	6.98	59		512	
Iowa, Iowa County.....	9.63	76	4	751	38
Minnesota:					
Southern.....	7.00	108	19	756	133
Steele County.....	6.22	86		535	
Wisconsin, southern.....	5.95	120	2	714	18

TABLE 491.—*Cost per head for fattening lambs.*OPEN-LOT FEEDING.¹

Region.	Year.	Num- ber of records.	Length- ing period (days).	Aver- age gain (lbs.).	Aver- age monthly gain (lbs.).	Feed.	Labor.	Build- ings and equip- ment.	In- ter- est.	Risk.	Miscel- laneous.	Credits.		Total.	Net cost of gain.
												Wool.	Ma- nure.		
Northern Colorado.....	1916-17	24	147	26	5.4	\$3.64	\$0.39	\$0.10	\$0.23	\$0.07	\$0.11	.....	\$0.14	\$0.14	\$4.96
Southern Colorado.....	1916-17	16	132	24	5.6	3.55	.36	.08	.18	.05	.13	.....	.08	.08	4.71
Western Nebraska.....	1916-17	24	132	19	4.5	2.91	.42	.12	.20	.12	.21	.....	.13	.20	4.17
Central Nebraska.....	1916-17	18	120	25	6.2	2.87	.24	.10	.17	.14	.06	.....	.02	.07	3.72
Total or average for region.....	.....	82	132	24	5.6	3.24	.36	.10	.20	.10	.13	.02	.11	.13	4.41

FINISHING IN FEED YARDS.

Nebraska.....	1912-13	.....	114	23	6.09	\$1.74	\$0.14	\$0.10	\$0.08	\$0.08	\$0.14	.....	.....	\$0.20	\$6.46
Do.....	1913-14	.....	87	21	7.80	1.79	.10	.06	.06	.04	.13	.....	.....	.16	5.97
Do.....	1914-15	.....	28,269	21	4.91	1.87	.12	.08	.08	.13	.17	.....	.....	.....	6.13
Do.....	1915-16	.....	23,862	17	4.46	1.71	.10	.05	.09	.12	.13	.....	.....	.....	6.77
Do.....	1916-17	.....	41,807	102	6.46	2.45	.19	.05	.12	.21	.33	.....	.....	.06	9.25
Do.....	.....	.....	44,182	96	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total or average for region.....	.....	.....	159,502	21	5.94	1.91	.13	.07	.09	.12	.18	.....	.....	.09	6.92

FEEDING IN CORN FIELDS.

Eastern Nebraska.....	1918	24	1,183	23	7.4	\$3.04	\$0.09	\$0.05	\$0.23	\$0.34	\$0.02	.....	.....	.....	\$4.06
Iowa.....	1918	12	953	91	5.7	2.92	.08	.03	.20	.31	.06	.....	.....	.....	3.19
Total or average for region.....	.....	36	2,136	92	6.6	3.00	.08	.05	.22	.33	.03	.27	.....	.27	3.76

BARN FEEDING.

Michigan.....	1917	13	646	138	6.7	\$2.71	\$0.36	\$0.50	\$0.18	\$0.10	\$0.05	\$0.34	\$0.24	\$0.35	\$4.45
Do.....	1918	24	423	130	6.2	3.18	.44	.49	.30	.17	.07	.24	.36	.69	6.35
New York.....	1918	9	1,039	108	5.8	4.25	.23	.52	.22	.33	.04	.07	.30	.37	5.24

¹ Unpublished data in files of U. S. Department of Agriculture.

TABLE 492.—*Feed requirements per head for fattening lambs.*^{1, 2}
OPEN-LOT FEEDING.

OF DENVER

Region.	Year.	Concentrates (pounds.)											Total concentrates.
		Corn.	Oats.	Barley.	Linseed oil meal.	Cottonseed oil meal.	Bran.	Broken beans.	Salvage.	Molasses.	Alfalfa meal.	Dry beet pulp.	Screenings.
Northern Colorado.....	1916-17	114	0.05	15.0	0.5	.....	.....	.....	.....	3.0	.....	.....	132.55
Southern Colorado.....	1916-17	120	2.00	12.0	12.0	.....	.....	.....	.....	2.0	25	.....	161.00
Western Nebraska.....	1916-17	90	.....	12.0	1.0	.....	.....	.....	.....	.7	.....	1	107.70
Central Nebraska.....	1916-17	125	5.00	.3	1.2	.....	.....	.....	.....	.....	.....	.....	151.30
FINISHING IN FEED YARDS.													
Nebraska.....	1912-13	121	.....	.....	1	3	3	.....	.....	.....	12	.....	3
Do.....	1913-14	95	1	.....	3	2	1	.....	.....	.....	7	.....	1
Do.....	1914-15	124	.....	.....	3	2	.....	.....	.....	.....	.....	.....	.....
Do.....	1915-16	112	.....	.....	4	5	1	.....	1	.....	5	.....	.....
Do.....	1916-17	110	1	.....	6	.....	16	.....	.....	.....	.....	.....	1
Do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total average for region.....	.....	112	.....	.....	3	2	4	.....	.....	.....	5	.....	1
FEEDING IN CORN FIELDS.													
Eastern Nebraska.....	1918	132	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	124.9
Iowa.....	1918	158	1	.....	40.9	.....	.....	.....	.....	.....	.....	.....	159.0
Total average for region.....	.....	141	1.5	.....	4.6	.....	.....	.....	.....	.....	.....	.....	145.1
BARN FEEDING.													
Michigan.....	1917	125	24	.....	.....	.....	.....	1.2	.....	.....	.....	.....	152.1
Do.....	1918	94	48	24	41.2	.....	5.0	.....	.....	.....	.....	.....	201.8
Do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New York.....	1918	7	12	27	41.7	.....	9.0	9.0	.....	0.7	.....	.....	124.7

OPEN-LOT FEEDING.

Region.	Year.	Dry roughage.						Succulent roughage.			Total roughage.	Acres.			Days pastured.
		Alfalfa hay.	Bean straw.	Straw.	Stalks.	Hay.	Timothy.	Total.	Beets.	Slage.	Total.	Beet tops.	Stover.	Rape.	
Northern Colorado.....	1916-17	200	7	21				288	\$71.00		71.00	288.00	0.007		3
Southern Colorado.....	1916-17	165		7				172				243.00	.007		13
Western Nebraska.....	1916-17	218		13				230	.75		.75	230.75	.002		2
Central Nebraska.....	1916-17	201		10				211				211.00			

FINISHING IN FEED YARDS.

Nebraska.....	1912-13	115		2	5			122			23	23.00	145.00			
Do.....	1913-14	115						115			22	22.00	137.00			
Do.....	1914-15	122						122			23	23.00	145.00			
Do.....	1915-16	126						126			17	17.00	143.00			
Do.....	1916-17	141					11	152			11	11.00	163.00			
Total average for region.....		124			1		2	127			19	19.00	146.00			

FEEDING IN CORN FIELDS.

Eastern Nebraska.....	1918					30		30				30.00	0.001	0.02	9
Iowa.....	1918					8		8				8.00	.01	.02	15
Total average for region.....						22.5		22.5				22.50	.005	.02	10

BARN FEEDING.

Michigan.....	1917			34		156		190			1	1.00	101.00	0.018		25
Do.....	1918			49		96		145			10	10.00	155.00	.004		18
New York.....	1918		32	34		76		142					142.00			22

¹ For number of lambs and pounds of gain, see Table 491, "Cost per head for fattening lambs."² Unpublished data in files of U. S. Department of Agriculture.³ Wet beet pulp.
⁴ Oil meal.

TABLE 493.—Yearly feed and man and horse labor requirements for producing 100 pounds of pork.¹

Region.	Date.	Droves.	Hours.		Pounds of feed.							Miscellaneous feeds.
			Labor.	Animal power.	Corn.	Oats.	Barley.	Wheat.	Tankage.	Oil meal.	Mill feeds.	Skim milk.
Iowa and Illinois	1921	39	1.7	0.2	403.4	21.5	1.4	0.5	8.1	0.7	1.7	27.0
Nebraska	1917	26	3.26	.64	437.9	27.4	.01	.....	6.2	2.0	5.0	5.4
Missouri	1917	13	3.36	.64	409.2	7.8	.....	.....	7.1	4.3	7.4	5.4
Central Iowa	1917	26	2.99	.67	622.0	32.7	.....	.....	4.0	1.3	.6	.3
Southwest Iowa	1917	20	3.25	.71	421.7	31.8	.....	.....	6.1	6.0	10.3	1.7
Average for 1917 records.	.....	85	3.18	.66	408.7	27.8	.003	.....	5.6	3.1	5.3	2.7
Missouri	1913	4	3.46	1.10	404.6	.....	.....	8.4	3.5	3.9	45.5	5.0
Do.	1914	12	3.46	.81	387.2	.....	.....	20.6	6.9	.6	8.5	5.3
Do.	1915	15	3.48	1.86	471.8	.....	.....	7.2	7.3	.4	38.1	10.1
Do.	1916	9	4.76	1.15	376.5	.....	.....	50.0	5.8	.9	21.5	11.1
Do.	1917	5	2.77	.60	323.2	.....	.....	.....	4.8	1.2	20.4	10.7
Average	1913-1917	45	4.12	1.11	399.1	.....	.....	10.9	6.2	.9	22.4	8.2
Minnesota	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
West Central	1908-1917	60	6.30	1.10	150.1	100.1	250.5	.....	.5	.....	33.1	30.5
South Central	1913-1917	40	6.10	.80	346.5	69.3	46.1	.....	.....	.....	30.4	63.8
Average	.....	100	6.20	.90	265.7	82.1	131.0	.....	.2	.....	31.6	52.2
Wisconsin	1912-1917	11	4.30	.73	401.6	27.6	347.4	.....	.....	3.0	91.4	17.6

¹ Unpublished data in files of U. S. Dept. of Agriculture.² Includes 0.23 pound rye.³ Includes 0.2 pound alfalfa hay, 0.2 pound clover hay, and 7.6 pounds bedding.

TABLE 494.—Cost of producing pork per 100 pounds.

Region.	Date.	Droves	Pounds produced.	Feed.	Pasture.	Labor.	Total feed and labor.	Depreciation on breeding herd.	Annual power.	Buildings, lot, and equipment.	Death loss.	Miscellaneous.	Interest on inv.	Marketing.	Gross cost.	Deductions.	Net cost.
Iowa and Illinois ¹	1921	39	2,804	\$3.22	\$0.55	\$0.47	\$1.24	\$0.25	\$0.04	\$0.41	\$0.06	\$0.37	\$0.13	\$0.29	\$5.79	\$0.02	\$5.77
Missouri	1917	85	91,081	12.81	.37	.80	13.98	.....	.10	.40	.22	.....	.27	.....	15.06	.....	.....
Missouri, Nebraska, and Iowa ¹	1913-1917	45	53,751	6.14	.36	.58	7.08	.....	.10	.10	.15	.....	.23	.....	4.96	.....	.....
Missouri ¹	1918-1917	100	8,207	6.76	.90	.90	7.75	.....	.15	.21	.21	.....	.20	.....	6.91	.....	.....
Nebraska	1912-1917	11	5,069	8.25	.47	.54	9.26	.....	.07	.27	.27	.....	.20	.....	9.80	.....	.....
Wisconsin ¹	.....	.....	.....	.....	.....	.....	.....	.....	.07	.20	.....	.....	.21	.....	4.43	.45	.....
S. Georgia ²	1916	218	.....	4.72	.....	.52	5.21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹ Unpublished data in files of U. S. Department of Agriculture.² U. S. Department of Agriculture Farmers' Bulletin 985 (1918).

INDEX.

	Page.
Aberdeen-Angus cattle, distribution.....	242
AGELASTO, A. M., C. B. DOYLE, G. S. MELOY, and O. C. STINE, article on "The cotton situation".....	323-406
Agents—	
county, number.....	38
extension, aid by local funds.....	36
Agricultural—	
Economics Bureau, organization.....	16-18
education, work of department.....	29-31
inquiry, joint commission.....	15
production—	
increase, comparison with population increase.....	408
preeminence of United States.....	407-412
products—	
exports by United States.....	407
imports and exports.....	737-769
statistics of production and exports.....	71-76
regions, divisions, descriptions, crop adaptability, etc.....	413-506
statistical data, trends, 1899-1921.....	787
Agriculture—	
American—	
description of graphic summary.....	408-410
graphic summary, article by O. E. Baker.....	407-506
maps and graphs, list.....	411-412
Department—	
appropriations, expenditures, and receipts, 1921.....	68-70
cooperation with Vocational Education Board.....	30
funds, distribution.....	25
graduate training of workers.....	65-66
housing needs.....	61-62
laws for administration.....	31-33
need for better salaries.....	63-64
organization.....	24-25
research work.....	25-29, 67
service work, important lines.....	39-40, 69
work in Alaska, various bureaus.....	60-61
economic conditions, discussion by Secretary.....	1-13, 66
Secretary, report, 1921.....	1-76
Alabama, interest rates on loans to farmers.....	368
Alaska—	
pulpwood supplies.....	59-60
soil survey, areas mapped.....	27
Alfalfa—	
acreage in, 1919.....	451
seed, prices at Kansas City, by months, 1912-1921.....	608
Almonds—	
acreage in, 1919.....	468
imports, statistics.....	741, 753
Analysis, methods, development, by research work.....	28
Animal—	
diseases, control work.....	41
matter, imports and exports, statistics.....	737, 738, 743-744, 749, 757-759, 764-765
products, statistics, 1921.....	681-683, 700-709, 718-722, 730-731, 735-736

Animals—	Page.
condemnation at slaughter, 1907-1921	736
farm—	
aggregate value, by States, comparison	733
number and value, Jan. 1, 1920	470
number in world countries	675-689
statistics, 1921	675-736
live—	
exports, statistics	743, 749
imports, statistics	737, 743, 749
meat, prices, index numbers, 1910-1921	781
predatory, eradication	45-46
Anthraxnose, cotton, nature and control	356-357
Aphis, corn-root, injuries and control studies	186-187
Appalachian region, cattle industry, feed requirements, etc	258-260
Apple trees, acreage in 1919	464
Apples—	
cold-storage holdings, by months	629
commercial crop in 1919	465
cost of production per acre, by States	816, 827
exports, statistics	751, 760
losses, causes and extent, 1912-1920	629
prices, by States and by months	625, 627-628
production—	
1919	465
labor and material requirements per acre	816
shipments, 1917-1921, by States	629
statistics, production, value, etc	625-629
Appropriations, Agriculture Department, 1921, details	68-70
Apricots, exports, statistics	760
Argentina—	
corn—	
production and exports	205, 206
production, quality, and price	205-207
Argols, imports, statistics	753
Arizona—	
cotton growing	372
wheat production	90
Arkansas, interest rates on loans to farmers	368
Asses—	
number and value, January 1, 1920	470
world countries, number	675-680
Assistant Secretary, supervision over extension work	37
Automobiles, number—	
of farms using, and per cent of total farms	505
on farms, by States	789
Baby beef, cost—	
of production, feed, and labor requirements	266-268
of 100 pounds of gain, by States	838
Bacon, exports, statistics	758
BAKER, O. E.—	
article on "A graphic summary of American agriculture"	407-506
C. R. BALL, C. E. LEIGHTY, and O. C. STINE, article on "Wheat production and marketing"	77-160
C. E. LEIGHTY, C. W. WARBURTON, and O. C. STINE, article on "The corn crop"	161-226
E. W. SHEETS, C. E. GIBBONS, O. C. STINE, and R. H. WILCOX, article on "Our beef supply"	227-322
Bales—	
cotton—	
density after recompressing	374
size, shape, and weight	373-374
linters, weights	382
Baling, cotton	373
BALL, C. R., C. E. LEIGHTY, O. C. STINE, and O. E. BAKER, article on "Wheat production and marketing"	77-160
Bananas, imports, statistics	740, 766

	Page.
Banks, loans—	
to cotton growers in leading States.....	369
to farmers, interest rates, by States.....	773
Barberry, eradication.....	45
Barley—	
acre, labor and material requirements by States.....	814
acres—	
graphic showing.....	102
in 1919.....	442
consumption in world countries, 1909-1918.....	580
cost of production per acre, by States.....	814, 822
exports, statistics.....	746
losses, causes and extent, 1909-1920.....	557
sowing dates, by States.....	775-776
statistics, acreage production, value, etc.....	71, 72, 74, 552-558
value of crop, comparison with wheat.....	80
weight per bushel, estimates 1902-1921.....	778
world countries—	
exports, 1911-1920.....	558
imports, 1911-1920.....	558
production and exports.....	781
yield and value per acre and price.....	556
Beans—	
acre, labor and material requirements, by States.....	812
cost of production per acre, by States.....	812, 820, 832
exports, statistics.....	748, 757
field, acreage in 1919.....	455
imports, statistics.....	742
prices, by States and by months.....	639-640
production and value by States.....	639
soy, statistics, acreage, production, prices, etc.....	640-641
statistics—	
acreage, production, value, etc.....	638-640
production, 1910-1921.....	72
velvet, acreage in 1919.....	444
world production and acreage, by countries.....	638
Beef—	
canned and pickled, exports, statistics.....	758
cattle—	
milking quality improvement.....	28
prices.....	692-695, 734
receipts at stockyards, and slaughter, 1921.....	698-699, 715, 735
<i>See also</i> Cattle, beef.	
consumption per capita 1907-1921.....	312-316
cost—	
of production, factors, variations, etc.....	265-275
to consumer, distribution of profits.....	300
cuts, standardized.....	308-312
exports, statistics.....	744, 758
grades, standards.....	308-312
imports, 1910-1920, world countries.....	709
oils, exports, statistics.....	750
production—	
areas.....	245-264
trend, discussion.....	317-321
supply, article by E. W. Sheets, O. E. Baker, C. E. Gibbons, O. C. Stine, and R. H. Wilcox.....	227-322
world countries exports, 1910-1920.....	699
Bees, number of colonies on farms, Jan. 1, 1920.....	488
Beeswax—	
exports, statistics.....	748
imports, statistics.....	737, 755
Beets—	
statistics—	
production, 1910-1921.....	73
summary, 1919, 1920, 1921.....	771

Beets—Continued.	Page
sugar—	
increase and production, by States.....	658, 659, 665
acreage in 1916.....	457
cost of production per acre, by States.....	811, 825
labor and material requirements per acre, by States.....	811
world production, by countries.....	665
beets, by price—	
price fluctuations.....	302
prices at Chicago 1906-1914.....	302
Berry, Columbian, description.....	26
Bilbaga, injuries to corn, control studies.....	186-187
Bladder—	
twine, cost as factor in wheat profits.....	117, 120
wheat, use in thrashing.....	92, 93
Biological Survey—	
receipts in 1921.....	60
stations in Alaska.....	60
Blight, chestnut, destructiveness.....	42
Blister rust, white-pine, destructiveness.....	42
Blue vitriol, use against bunt in wheat.....	110
Boards of trade, supervision by Secretary.....	34-35
Boll weevil—	
cotton—	
cost in destruction of cotton.....	41
origin, history, habits, and control.....	349-352
damage to cotton crop, by States.....	613
injury to cotton production.....	334, 406
spread in cotton region, map.....	350
Bollworm—	
cotton, habits and control.....	354
pink—	
eradication work.....	42-43
history and control work.....	352-354
Bolly cotton, description.....	381
Bonds, farm-loan, and farm-mortgage extension.....	14, 15
Borer—	
corn, European, infested area.....	187
European-corn, injuries, and control studies.....	187
larger cornstalk, injuries to corn, control studies.....	187
Boys' clubs, advantages.....	37
Brahman cattle, advantages for Cotton Belt.....	254-255
Bran, prices at Minneapolis, by months, 1916-1921.....	603
Brazil, cotton-growing increase.....	327
Bread, making of, flours of several kinds.....	123-124
Breeders, wheat, cooperation with market specialists.....	21
British Empire, agricultural production, comparison with United States.....	407
Broom corn, statistics, acreage, production, prices, etc.....	73, 643
Buckwheat—	
acreage in 1919.....	444
cost of production per acre.....	826
exports, statistics.....	746
harvesting with reaper, note.....	89
statistics, acreage, production, value, etc.....	71, 72, 565-567
yield and value per acre, and price.....	567
Bud selection, perennial plants.....	27
Buenos Aires, freight rates on wheat.....	136
Buffaloes, number in world countries.....	675-680
Buildings—	
Agriculture Department, condition.....	61-62
farm, value, January 1, 1920.....	494
Bulls, purebred beef breeds on farms.....	241
Bunt, damage to wheat.....	110
Burros, number and value, January 1, 1920.....	470
Bushel weights of grains, 1902-1921.....	778

	Page.
Butter—	
exports, statistics.....	743, 757
imports, statistics.....	737
prices.....	793
production—	
in factories in 1921.....	481
on farms in 1919.....	480
statistics, production, prices, and international trade.....	703-705
world countries, exports, 1909-1920.....	704
world countries, imports, 1909-1920.....	704
Cabbage—	
cost of production per acre, by States.....	829
market acreage in 1919.....	460
prices, by months and by States.....	648-649
production, acreage, and yield, by States.....	648
shipments, 1917-1921, by States.....	649
statistics—	
acreage, production, value, etc.....	648-649
production, 1910-1921.....	72
Calcium arsenate, use against cotton pests.....	351, 354
Calfskins—	
exports, statistics.....	744
imports, statistics.....	738, 765
California—	
cotton growing.....	372
fruits, production and prices.....	634
nuts, production and prices.....	634
oranges, production and value, 1915-1921.....	633
wheat-production periods.....	89, 90, 91, 94, 95, 96
Calves—	
births, by months.....	287
condemnation at slaughter, 1907-1921.....	735
number raised in 1919.....	475
prices at principal markets.....	692-695
raising for baby beef, feed and labor requirements.....	266-268
receipts at stockyards, and slaughter, 1921.....	698-699, 735
slaughter, 1907-1921.....	316
slaughter under Federal inspection.....	291
<i>See also</i> Cattle.	
Cane—	
acreage—	
by States.....	660
1919.....	457
in Hawaii.....	661
cost of production per acre.....	829
forage or fodder, acreage in 1919.....	445
Louisiana production, 1911-1921.....	657
sorghum, for sugar, acreage in 1919.....	457
Canker, citrus, control cost, etc.....	42
Cantaloupes—	
cost of production per acre.....	829
market—	
acreage, 1919.....	460
shipments, 1917-1921, by States.....	654
Carloads, weight of various commodities.....	791
Carrots, cost of production per acre.....	829
Cattle—	
beef—	
breeds, distribution.....	242-244
cost of 100 pounds of gain, by States.....	836-839
importance in agriculture.....	227-232
marketing methods.....	277-280
marketing, seasonal movement.....	287-292
number and value, January 1, 1920.....	470
number, January 1, 1920.....	476
number on farms, map.....	229

Cattle—Continued.

	Page.
beef—Continued	
prices at Chicago, monthly averages.....	292-304
publications relating to.....	322
pure bred, number on farms, January 1, 1920.....	478
pure bred, value and numbers on farms, etc.....	239-244
westward movement of industry.....	232-239
condemnation at slaughter, 1907-1921.....	735
dairy—	
number and value, January 1, 1920.....	470
number, January 1, 1920.....	477
pure bred, number on farms January 1, 1920.....	478
exports, statistics.....	743, 750, 757
fattening, feed and labor requirements.....	269-275
imports, statistics.....	737, 704
industry—	
growth and extension.....	232-239
in important countries.....	230
relation to soil fertility.....	228
numbers—	
increase in South, 1880-1920.....	338
on farms, January 1, 1920.....	475
pure bred, relation to other cattle, by States.....	241
range, development of industry.....	235-238
ratio to population, and slaughter.....	318-320
slaughter—	
in 1907-1921.....	316
monthly.....	289
under Federal inspection.....	290
statistics, number, value, imports, and exports.....	690-700
testing for tuberculosis.....	45
tick, eradication work.....	44
tuberculous, indemnity funds.....	45
value—	
comparison with hogs and sheep.....	228
on farms, 1910-1921.....	163
wintering in Cotton Belt, feed used per 1,000 pounds.....	256
world—	
countries, number.....	675-680
production.....	231
Cattlemen, loans, needs and practices.....	275-277
Celery, shipments 1919-1921, by States.....	652
Cereals—	
breeders, cooperation with market specialists.....	21
consumption in world countries, 1909-1918.....	580
production in tons, per farmer.....	403
statistics, acreage, production, and exports, 1910-1921.....	71, 72, 74
Cheese—	
exports, statistics.....	737, 743, 750, 764
production in factories in 1921.....	482
statistics, production, prices, and international trade.....	705-707
Chemistry Bureau, receipts in 1921.....	69
Chicago—	
freight rates on wheat.....	135, 136
market for corn, price determination.....	217
prices of wheat.....	145, 146
wheat market.....	92
Chickens—	
breed establishment.....	28
prices, 1909-1921.....	709
China—	
agricultural production, comparison with United States.....	407
cotton production.....	327
wheat production, note.....	81

	Page.
Chinch bugs—	
damage to wheat	108, 109
injury to corn, control studies	186-187
Cholera, hog, control progress	46
Circulars, preparation for teachers	30
Citrus—	
canker, control cost, etc.	42
fruits, acreage in, 1919	493
Civil War—	
effect—	
on cotton growing	331-334
on wheat market	153
relation to wheat production, note	93
Climate—	
corn, remarks	103
cotton belt, variations	341-343
effect on wheat growing	81
influence on corn production and yield	181-183
relation—	
to crop, selections	100
to wheat marketing	132
to wheat rotation	97
Clover—	
acreage in 1919	452
and timothy mixed, acreage in 1919	449
seed—	
exports, statistics	748
prices, by months, 1910-1921	606
production and value, by States and by months	605-606
production, labor, and material requirements per acre, by States	816
receipts at Chicago, by months, 1910-1922	606
statistics, production, yield, prices, etc.	605-606
Club work, boys' and girls', progress	37, 38
Cocoa—	
exports, statistics	744, 747, 749
imports, statistics	738, 749, 753
Coconuts, imports, statistics	741
Codling moth, control cost	41
Coffee—	
exports, statistics	744, 749
imports, statistics	739, 749, 757, 766
trade, international, 1909-1920, by countries	669
Cold storage, space, by States, 1921	793
Colorado, wheat production periods	92, 96
Colts—	
horse, on farms, number, January 1, 1920	471
mule, on farms, January 1, 1920	471
Columbian berry, description	26
Compressing, cotton, and recompressing	374, 590
Cooperation—	
importance in eradication of pests	46
in forestry work and fire control	54, 56
Copper sulphate, use against hant in wheat	110
Corn—	
acre, labor and material requirements by States	808
acreage—	
annual, in United States	161
cut for forage or fodder, in 1919	436
for grain, in 1919	435
graphic showing	103
in South, comparison with cotton	337
yield, and production, 1866-1921	169
advantages, and climate	103
amount required to purchase various farm tools, etc., 1913, 1920, 1921	216

Corn—Continued.	Page.
Argentina, production and exports, 1961-1921.....	205
Belt—	
cattle industry, management, fattening methods, etc.....	260-265
crop combinations.....	176-178
location, area, and description.....	175-176
lozen, European, area infested.....	187
consumption in world countries, 1909-1918.....	590
cost of production per acre, 1902-1921, by States.....	808, 817-818
cribbing, methods.....	202
crop—	
article by C. E. Leighty, C. W. Warburton, O. C. Stine, and O. E. Baker.....	161-226
marketing channels.....	224
cutting—	
for silage, etc.....	178-181
with harvester.....	180, 181
danger and effect of early frosts.....	182
destruction by smut, 1917-1920.....	185
diseases, injuries and effect on corn yield.....	185, 186
early history and crop development.....	171-175, 219-220
exports—	
1891-1920.....	203-205
and per cent of crop, 1891-1920.....	204
comparison with wheat.....	80
statistics.....	746, 751
farmers growing, and per cent of all farmers.....	162
farms producing in 1919.....	163
feeding to live stock.....	13
freight rates—	
in 1910-1921.....	207
rail and ocean.....	207-208
grades, condition governing, effect on prices, etc.....	195-199
grading, quality, etc., as factors.....	195-199
growing—	
Central Northwest.....	105
season and frost.....	106
season and requirements.....	183
season, length, various sections.....	182
handling the crop, method.....	178-181
hauling, cost per ton per mile.....	791
husking from standing stalks, value.....	178, 192
imports—	
in 1914.....	205
statistics.....	740, 753, 766
leading crop in United States, in acreage and value.....	161
losses, causes, and extent, 1909-20.....	514
market prices, determination at Chicago.....	217
marketing—	
movement from producing farms.....	199-202
receipts at principal markets, 1917-1921.....	195-197
marketings—	
monthly.....	201
per cent of total crop in 1919.....	437
merchantable, per cent of total crop, 1886-1921, 1911-1920.....	198
moisture—	
content and shrinkage in storage, tests.....	202-203
content, principal markets, by months.....	203
monthly movement from county where grown, per cent of crop, 1911- 1920.....	200, 201
new, shrinkage, by months, 9-year average.....	203
planting—	
date, various sections.....	183
dates, by States.....	775
season, various sections.....	184

Corn—Continued.

price—	Page.
annual, in Chicago, New York, Liverpool, 1840-1921	218
conditions, and outlook	219-226
discount, by grades, 1920, 1921, by months	197
trend, 1840-1921	217-219
prices—	
at principal markets	514-515
during war period, with comparisons	215, 217
in terms of beef	296
on farm, 1866-1920, discussion, etc	220-223
on farms, and farm value per acre, 1866-1921	220
on farms, and marketings, 1909-1914, by months	213
on farms, and purchasing power, by months, 1912-1921	214
on farms, December 1, 1921, with comparisons	209-212
regulation by grades, fluctuation, etc	195-199
through winter-fed cattle	273-275
variations, seasonal and annual	212-215
production—	
and distribution	165
and exports, United States and Argentina, average 1900-1920	206
Argentina, increase in	205-207
conditions governing	170
cost suggestions	188-194
cost survey	189, 191
cost variations, factors	190-194
cost working standards, studies, etc	188-190
costs, estimating methods, and samples	193-194
factors influencing	181-187
financing methods	208
in 1839, 1859, 1879, 1899, 1919	171-173
in 1919, ratio to production, 1911-1920	437
in every State	161
in United States, 1911-1920	198
in United States, 1912, 1920, 1921, acreage, yield, etc	168-171
per capita and yield per acre	432
per capita, 1870-1922	222
price and purchasing power December 1, 1866-1921	222
relation to meat supply	225-226
purchasing power—	
determination method	215
in 1866-1921	220-222
maintenance methods	224-225
receipts, by grades, principal markets, 1917-1921	196
rots, investigations	27
statistics—	
acreage, production, value, etc., 1921	71, 72, 74, 80, 507-519
summary, 1919, 1920, 1921	770
surplus production, areas	199
sweet—	
cost of production per acre	829
market acreage in 1919	462
use—	
and value for food and a feed for stock	164-165
for food and per cent of crop	165
uses—	
and value	164
on farms and per cent of crop	165
value—	
comparison with other crops	164
of crop, comparison with wheat	80
of crop in United States, 1910-1914, and 1915-1919	164
on farms, 1910-1921	163
world—	
exports by countries, 1909-1920	519
imports by countries, 1909-1920	519

Corn—Continued.

world—Continued.	
production—	Page.
and exports.....	781
by countries.....	166-168
equal to any other cereal.....	161
in 1895-1921, 1919-1921.....	167, 168
increase, 1895-1897 to 1918-1921.....	168
yield—	
and value per acre, and price, 1917-1921.....	512
increase, aid of Agriculture Department and colleges.....	175

Cotton—

acre, labor, and material requirements, by States.....	809
acreage—	
and production in 1919.....	484
decrease, 1921, price.....	13
yield and production, 1866-1921, trend.....	335-336
American-Egyptian, location of crop and quality of fiber.....	372
angular leaf-spot, nature and control.....	357
anthracnose, nature, and control.....	356-357
bales, size, shape, and weight.....	373-374
baling.....	373
Belt—	
beef-cattle industry.....	254-258
definition, and general conditions.....	333-348
soils, climate, and farm practices.....	340-348
boll weevil, history, habits, and control.....	349-352
bollworm, habits and control.....	354
bolly, description.....	381
classification by Agriculture Department.....	385
compress, description.....	375
consuming markets.....	385
consumption—	
in 1896-1921.....	391
of crop.....	391-400
cost of production per acre, by States.....	809, 819
crop—	
American, deterioration in quality.....	400-404
importance in the South.....	323-324
1920, slump in price.....	13
cultural practices against boll weevil.....	352
diseases, description and control.....	355-357
Egyptian, description.....	329
export markets.....	384, 385
exports.....	323, 394, 396-399
exports—	
reduction in 1920 effect on prices, 1921.....	396, 404
statistics.....	745, 749, 751
to specified countries, 1896-1921.....	399
farms, organization for profitable production.....	365-367
fertilizers.....	348
future, markets or exchanges.....	385
ginning, baling, and compressing.....	372-375
grading.....	378-381
growers, financing.....	367-369
growing—	
foreign competition.....	401-402
one-variety communities, benefits.....	402-404
under irrigation farm practices.....	347
handling and marketing.....	370-390
hauling, cost per ton per mile.....	791
imports.....	393
imports, statistics.....	739, 749, 759, 766
improvement by use of better varieties.....	402
industry—	
problems, improved methods and outlook.....	400-406
leaf worm, habits and control.....	354
long-staple, fiber length and quality.....	371

Cotton—Continued.

	Page.
losses, causes and extent, 1900-1920	613
marketing	370-390
marketing and prices	385-390
markets, classification and location	383-385
pests, description and control	349-354
picking dates in Texas	342
Pima, fiber length	372
planting, by States	775-776
dates, in Texas	342
press, description	373, 375
prices—	
1866-1921	610, 612-615
and quotations, variations	385-387, 388-390
comparison with wages and farm supplies, 1910-1921	364-365
production—	
and consumption, 1913-14 and 1920-21, comparison	405
and reports	781
by countries	609-610
by years and by States	610-612
comparison of long-staple with short-staple	371
cost, studies, results	357-365
costs, figuring, example	362-363
costs, variations	358-362
per capita and yield per acre	432
shifts in region since 1830	330-335
recompressing	374, 390
root knot, cause and prevention	356
rust, cause and control	356
sea-island—	
description	327, 329
quality, and decrease in quantity	372, 374
selling in the seed	375-376
short-staple, fiber length and quality	370-371
situation, article by A. M. Agelasto, C. B. Doyle, G. S. Meloy, and O. C. Stine	323-406
snaps, description	381
spot markets, location and functions	383-385
standards, official, distribution	379-381
statistics—	
acreage, production, value, etc.	71, 73, 75, 609-616
summary, 1919, 1920, 1921	770
supply—	
and distribution, 1905-1921	393-394
1921, and prices	404
Texas root rot, results	356
trade, international—	
1866-1921, by years and by countries	610, 613
charts	397, 398
transportation, practices	390
types, commercial, description	327-330
upland—	
long-staple, description	329
short-staple, description	329-330
value—	
comparison with other crops	324
of crop, comparison with wheat	80
on farms, 1910-1921	163
varieties—	
improvement	402
protection by community action	402-404
warehouses, location and use	376-378
warehousing	376-378
wilt, cause and prevention	355-356
world—	
production	324-327

	Page.
Cotton—Continued.	
world—Continued.	
production and exports.....	781
production by countries, 1909-1920.....	609-610
yield and value, by States.....	612
Cottonseed—	
crushing process and products obtained.....	376, 399
defining.....	376, 381
disposal at public ginneries.....	375
exports, statistics.....	748
handling and uses.....	376, 399-400
meal, prices at Memphis, by months.....	604
oil—	
exports, 1913-1920, world countries.....	800
imports, 1913-1920, world countries.....	800
prices, by months, 1910-1922.....	618
production, imports and exports, 1912-1921.....	799
trade, international, by countries.....	618
prices, by months, 1910-1921.....	617
production and value by States.....	617
products, value and increased demands.....	376, 399-400
Cotton-free zones, enforcement in fight against weevil.....	352, 353
Cottons, Asiatic, description.....	330
Cowpeas—	
statistics—	
acreage, production, prices, etc.....	641
summary, 1919, 1920, 1921.....	771
Cows—	
cost of feed and labor in producing baby beef.....	268
dairy—	
feed and labor requirements, by States.....	835
yearly cost, production and by-products, by States.....	833-835
milk, number and value, and prices.....	690-692
Cradle, wheat, harvest use.....	87, 89
Cranberries—	
acreage in 1919.....	469
production, acreage, value, by States.....	634
Credit—	
cotton growers', forms and rates.....	367-369
farmers'—	
beef production, importance.....	275-277
difficulties.....	11, 15
kinds of loan.....	121
form, for wheat marketing.....	133
Crop—	
Estimates Bureau, consolidation.....	16
reports, service work.....	40
Cropping systems, representative cotton farms.....	365-367
Crops—	
acreage and value, relative importance, 1919.....	432
advantages and selection.....	104, 105
combinations—	
in Corn Belt.....	176
in Cotton Belt.....	343-346
composite—	
conditions, monthly, 1910-1921.....	777
yields, 1917-1921, by States.....	777
cost of production, 1920.....	4
diversification in the South.....	336-338, 366
diversified, acreage, comparison with cotton.....	337
farm, production and marketing, cost studies.....	28
prices—	
conditions determining.....	2-3
index numbers, 1903-1921.....	781
reduction, 1920.....	4, 8, 12-13
production, labor and material requirements per acre.....	808-832
purchasing power, reduction.....	6-7

Crops—Continued.

sales—	Page.
by farmers, monthly percentage.....	779
by farmers, per cent of all receipts, by States.....	780
rotations for Corn Belt, conditions governing.....	176-178
statistics, summary, 1919, 1920, 1921.....	776-772
value—	
by States, comparisons.....	773
of all in United States, 1919.....	483
per acre, 1866-1921.....	772
Cucumbers, cost of production per acre.....	829
Cull products, farm, utilization studies.....	28
Currants, imports, statistics.....	740, 753

Dairy products—

exports, statistics.....	74, 748, 749, 750, 757, 758
imports, statistics.....	737, 749, 753, 757, 764
prices.....	13
receipts from farm sales during 1919.....	479
reports, periodical.....	40
See also Butter; Cheese; Milk.	

Dakota. See North Dakota.

Dakotas, wheat-production periods.....	94, 96
Dates, imports, statistics.....	740, 755
Day, length, relation to plant growth, studies.....	27
Deflinting, cotton seed, and uses of linters.....	376, 381-382
Demonstration, home work, increase.....	36-37, 38
Department. See Agriculture Department.	

Diseases—

corn, injuries, effect on yield.....	185-186
grain, relation to market values.....	22
plant and animal, control work.....	41
Diversification, crop, in the South.....	336-338, 366
DOYLE, C. B., A. M. AGELASTO, G. S. MELOY, and O. C. STINE, article on "The cotton situation".....	323-406
Drainage, investigations of.....	28
Drought, effect on wheat quality.....	127
Drugs, composition research.....	28

Dry—

farming, wheat rotation, factors in choice.....	97
land, wheat production.....	93, 94, 96
Durum wheat, production, yield, and district.....	123, 124

Economics—

Agricultural Bureau, organization.....	16-18
agricultural, study.....	15-18
home study.....	31

Education—

agricultural, extension and improvement.....	29-31
graduate training in Department.....	65-66

Eggs—

exports, statistics.....	743
imports, statistics.....	737
prices and holdings.....	708

Egypt, cotton production.....

Egyptian cotton, description.....	325
Electric lights, use on farms, statistics.....	329
Elevator, wheat, use in marketing.....	788

Elevators, grain, remarks and illustrations.....

Elevators, grain, remarks and illustrations.....	131
Equipment, farm, manufacture, 1920.....	795-798
Expenditures, Agriculture Department, 1921.....	69

Experiment stations—

funds, State and Federal.....	29
research work, expenditures in 1921.....	70
Explosives, manufacture from linters.....	382

Exports—

agricultural products, statistics.....	744-748, 750-752, 769
barley for world countries, 1911-1920.....	558

Exports—Continued.	Page.
cattle, statistics	743, 750, 751
coffee, 1909-1920, by countries	669
corn—	
and per cent of crop, 1891-1920	204, 206
for 1891-1920	203, 205
for world countries, 1909-1920	519
cotton	353, 394, 396-399
cotton, 1866-1921	610, 616
cottonseed oil—	
by countries, 1909-1920	618
1913-1920, world countries	800
farm products, 1910-1921	74-75
flaxseed, of world countries, 1911-1920	574-575
hides and skins, 1909-1920, world countries	681
hops, 1910-1921	686
horses and mules, 1918-1920	743
linseed oil, 1913-1920, world countries	803
markets for cotton	384, 385
meat and meat products, 1911-1920, world countries	682
mutton, 1910-1920, world countries	718
oats of world countries, 1911-1920	551
olive oil, 1913-1920, world countries	801
peanut oil, 1913-1920, world countries	802
peanuts, by countries	646-647
pork, 1910-1920, world countries	729
potatoes—	
for 1866-1921	583
world countries	590
rice, of world countries, 1909-1920	579
rye, of world countries, 1911-1920	565
sheep, 1918-1920	743
swine, 1918-1920	743
tea, by countries	668
vegetable oils, 1912-1921	799
wheat, for world countries, 1909-1920	538
wool, 1909-1920, world countries	722
Extension work—	
agencies employed	37-38
aid to negro farmers	36
consolidation of offices	35-36
for improvement of farm homes	31
in States, expenditures, 1921	70
offices consolidation	35-36
supplemental funds by States and counties	36
unified programs	38
Farm—	
American, investment, organization, etc	410
animals—	
number and value, January 1, 1920	470
<i>See also</i> Animals; Live stock.	
buildings, value, January 1, 1920	494
crops—	
acreage and production, 1910-1921, statistics	71-73
purchasing power of 1 acre, per cent of 1914	782-783
statistics summary, 1919, 1920, 1921	770-772
enterprises, selection by cotton farmers, examples	365-367
implements—	
and equipment manufacture, 1920	795-798
and machinery, value, January 1, 1920, and per farm	494
labor—	
supply and demand, 1919-1922	786
wages, 1910-1921	784-785
lands—	
area in United States	23
increase in value	3, 4, 10, 24
value per acre, January 1, 1920	492

Farm—Continued.	Page.
Management Office, consolidation.....	16
organization, importance.....	225
prices—	
relation to high freight rates.....	7-10
slump in leading crops.....	12
products—	
carload weights.....	791
cost data.....	804-845
production and exports, statistics.....	71-76
railway freight tonnage, 1916-1921.....	790
sales by farmers, monthly percentages.....	779
value, 1879-1921.....	772
profits increase, study of production cost.....	111
property, value, January 1, 1920.....	493
wages reduction, disproportionate.....	5, 12
women, aid by home demonstration work.....	36-37
Farmer—	
American, efficiency.....	5, 24
income uncertainty.....	1-6
study of production cost, point of view.....	112
Farmers—	
condition, discussion by Secretary.....	1-13, 66
cotton—	
loans and interest rates.....	367-369
marketing policy.....	387-388
selection of enterprises, examples.....	365-367
credit, difficulties.....	11, 15
difficulties, matter of national concern.....	11
legislation for.....	13-15
loans, interest rates, by States.....	778
losses by increased prices of land.....	10-11
negro, aid by extension workers.....	36
number growing corn, and per cent of all farmers.....	162
number in United States.....	407-408
number reporting use of gas, electric lights, and telephones.....	788
numbers growing wheat, by States.....	78
profits increase, suggestion for.....	119
sales—	
per cent of receipts by classes.....	780
receipts, monthly percentage.....	779
seed-grain loans in 1921.....	70
supplies—	
cost, comparison with farm wages, 1910-1921.....	193
prices, table, 1909-1921.....	782-783
Farming, tractor, cost data.....	805-807
Farms—	
average acreage, January 1, 1920.....	491
beef cattle, number reporting pure bred, by States.....	241
cotton—	
organization for profitable production.....	365-367
supplies and wages, cost, comparison with cotton prices, 1910-1921.....	364-365
crop production and marketing cost, studies.....	28
extent of tenancy, etc.....	498
home improvement, by extension workers.....	31
number and acreage.....	487, 490
operation—	
by colored owners or tenants January 1, 1920.....	501
by owners or tenants, value, etc.....	498
by white owners or tenants, number January 1, 1920.....	500
practices in Cotton Belt variations.....	346-348
value, and per cent on land, buildings, and live stock.....	497
Fattening—	
beef cattle—	
cost, feed, and labor requirements.....	269-275
cost of 100 pounds of gain, by States.....	836-839
lambs, cost per head, by States.....	842-844

	Page.
Feed—	
baby beef, requirements.....	266-268
expenditure per farm, in 1919.....	495
prices, by months, 1910-1921.....	603-604
requirements for cattle in Cotton Belt.....	256-258
Fertilizer—	
cost—	
as factor in wheat profits.....	117
in cotton production.....	361, 362, 363
expenditure per farm, in 1919.....	496
Fertilizers, cotton.....	348
Fibers—	
animal—	
exports, statistics.....	743
imports, statistics.....	737, 764
vegetable, imports, statistics.....	739, 749, 753, 754, 759, 766
Flgs, imports, statistics.....	740, 755
Filberts, imports, statistics.....	741
Finance, wheat storage and movement.....	133-134
Fire, protection work in forests.....	54, 55, 56
Flail, wheat harvest use.....	87, 88
Flax—	
acreage in 1919.....	446
cost of production per acre.....	830
harvesting with reaper, note.....	89
imports, statistics.....	739, 753, 754, 766
statistics, acreage production, value, etc.....	568-575
Flaxseed—	
exports of world countries, 1911-1920.....	574-575
imports—	
of world countries, 1911-1920.....	574-575
statistics.....	748, 753, 754, 761, 767
losses, causes and extent, 1909-1920.....	572
statistics, acreage production, value, etc.....	73, 570-575
Florida, oranges, production and value, 1915-1921.....	633
Flour—	
exports, statistics.....	747, 752, 761
imports, statistics.....	740, 753, 754
kinds and blends, discussion.....	123
prices per barrel for, 1913-1921.....	533
Fodder—	
cane, acreage in 1919.....	446
corn, acreage cut in 1919.....	436
sorghum, acreage in 1919.....	445
Food—	
and drugs act, administration.....	32
composition, research.....	28
corn, use and value.....	164
inspection, service work.....	40
production, relation to farming.....	18
supplies inspection for other departments.....	40
supply, importance to Nation.....	1-3
surplus, need by starving nations.....	6
Foot-and-mouth disease, control.....	42
Forage—	
acreage in 1919.....	447
cane, acreage in 1919.....	446
character on western ranges.....	251
corn—	
acreage cut.....	179
acreage cut in 1919.....	436
kinds and production in 1919, by States.....	262
sorghum, acreage in 1919.....	445
Forecasts, weather, service work.....	39
Foreign—	
competition, relation to high freight rates.....	9-10
nations, need of surplus crops.....	6

Forest—	
products—	Page.
exports, statistics	745-743, 749, 756, 762-763, 769
imports, statistics	739-740, 749, 756, 768
laboratory at Madison, Wis.....	53
utilization	57
Service—	
cooperation with other bureaus.....	58-59
receipts, 1921.....	69
Forestry, agricultural problem.....	58-59
Forests—	
acreage in 1920	426-427
conservation and protection.....	54-57
destruction by wasteful methods.....	52
experiment stations, scope of work.....	53, 55
National—	
area, by States.....	792
designation and administration.....	51-57
policy of administration.....	52-54
revenue from various sources.....	792
roads, appropriation.....	50
timber uses, statistics.....	792
utilization for grazing.....	57
new purchases to protect watersheds.....	53, 55
private, owners' cooperation with Government.....	54
protection from fire.....	54, 55, 56
Formaldehyde, use against bunt in wheat.....	110
Freight—	
rates—	
aid to foreign competition.....	9-10
relation to farmers' incomes.....	7-10
ocean, for corn, 1910-1921.....	207
tonnage on railways, farm products and other, 1916-1921.....	790
Frost, risk in Iowa and North Dakota.....	106
Frosts, early, danger to corn crop.....	182
Fruits—	
acreage and value in 1919.....	463
bush, acreage in 1919.....	469
citrus, acreage in 1919.....	468
fresh or dried—	
exports, statistics.....	746, 760
imports, statistics.....	740, 757, 766
improvement by bud selection	27
market receipts, 1916-1921	652-656
statistics—	
acreage, production value, etc.....	72, 625-634
summary, 1919, 1920, 1921.....	771
Fuel, tractor, requirements and cost per acre.....	806
Fungi, damage to wheat.....	110
Future—	
markets, cotton, domestic and foreign.....	385
trading act, administration.....	34-35
Gas, use on farms, statistics.....	788
Georgia—	
cotton—	
farms, organization for profit, examples.....	365-367
production costs.....	363
interest rates on loans to farmers.....	368
GIBBONS, C. E., O. E. BAKER, E. W. SHEETS, O. C. STINE, and R. H.	
Wilcox, article on "Our beef supply".....	227-222
Gin, cotton, roller and saw, description and use.....	372-373
Ginneries, public, custom work.....	375
Ginning, cotton, machines, description and use.....	372-375
Gipsy moth, control work.....	43
Girls' clubs, advantages.....	37
Glucose, exports	751, 760

	Page.
Glue—	
exports, statistics.....	743
imports, statistics.....	737
Goats—	
condemnation at slaughter, 1907-1921.....	736
number—	
in world countries.....	675-680
on farms and ranges, Jan. 1, 1920.....	486
Goatskins, imports, statistics.....	738, 755, 765
Grades—	
corn, relation to marketing and prices.....	195-199
cotton, official standards.....	379-381
standard, for cattle and beef.....	308-312
Grading, cotton.....	378-381
Graduate work, department.....	65-66
Grain—	
diseases in relation to market values.....	22
exports, statistics.....	746, 747, 751, 752, 753, 760-761
imports, statistics.....	740, 753, 754
exchange, supervision.....	14, 34-35
harvest time relations.....	100
marketing studies.....	21-22
products—	
exports, statistics.....	746, 747
imports, statistics.....	746-747
selection for rotation with wheat.....	97
statistics of crops of 1921.....	507-580
storage, capacity of mills and elevators, by States, 1918.....	794
Grains—	
small—	
acreage in comparison with wheat.....	99
cut for hay, acreage in 1919.....	453
use as feed, profits.....	13
weights per bushel, estimates, 1902-1921.....	778
Grapefruit, imports, statistics.....	740, 757
Grapes—	
imports, statistics.....	740
shipments, 1919-1921, by States.....	654
Grapevines, acreage in 1919.....	467
Grasses—	
tame, acreage in 1919.....	452
use in rotation with wheat.....	97
wild, salt, or prairie, acreage in 1919.....	450
Grasshoppers, damage to wheat.....	108, 109
Grazing—	
capacity of western ranges.....	251-253
forest.....	57
Great Basin, wheat production.....	91
Great Plains—	
wheat production.....	95, 96
wheat rotation.....	97
Growing season average length.....	419
Grubs, white, injury to corn crop, control studies.....	186-187
Gums, imports, statistics.....	739, 749
Hams and shoulders, exports, statistics.....	759
Harvest—	
monthly, of crops, percentages.....	774
order of precedence with grains.....	100
Harvesters, wheat, methods of use.....	92, 93
Harvester-thresher, use in wheat harvest.....	93
Harvesting corn, cutting with harvester.....	180, 181
Hauling, by wagon and motor-truck, cost, etc., 1906, 1916.....	791
Hawaii—	
sugar production 1913-1920.....	661
sugar production 1856-1921.....	657

	Papa.
Hay—	
acre, labor and material requirements by States.....	814-815
acres—	
1919.....	447
in South, 1879-1919.....	327
cost of production per acre, by States.....	814-815, 823
exports, statistics.....	747, 749
growing in Central Northwest.....	105, 106
imports, statistics.....	741, 749
losses, causes and extent 1909-1920.....	600
market receipts, by months and years.....	602
prices, by States and by months.....	595-601
production—	
and value by States.....	595-599
1919, by States.....	263-264
per capita and yield per acre.....	432
shipments, by months, 1910-1921.....	603
statistics—	
acres, production, value, etc., 1849-1921.....	73, 80, 595-603
summary, 1919, 1920, 1921.....	770
value of crop, comparison with wheat.....	80
wild, production 1919, by States.....	263
yield and prices, by States.....	598
Hemp—	
acres in 1919.....	446
imports, statistics.....	739, 753, 754, 766
Hereford cattle, distribution.....	242
Hessian fly, damage to wheat.....	108, 109
Hides—	
exports—	
statistics.....	744
world countries, 1909-1920.....	681
imports—	
statistics.....	738, 755, 765
world countries, 1909-1920.....	681
prices, Chicago, 1910-1921.....	700
Hog cholera, control progress.....	46
Hogs—	
condemnation at slaughter, 1907-1921.....	735
importance in consumption of corn.....	164
market receipts at stockyards, and slaughter, 1915-1921.....	715, 727-728, 735
number—	
and value, January 1, 1920.....	470
in world countries.....	675-680
increase in South, 1880-1920.....	338
on farms, January 1, 1920.....	483
prices.....	723-725
ratios with corn, 1910-1921.....	729
registered, on farms, January 1, 1920.....	484
statistics, number, value, imports, and exports.....	722-729
value, comparison with cattle and sheep.....	228
weight 1921 and 12-year average at principal markets.....	729
<i>See also Swine.</i>	
Home economics, study.....	31
Homes, farm—	
improvement by extension workers.....	31
number reporting water supply.....	506
Homesteads, relation to wheat production, note.....	93
Honey—	
exports, statistics.....	743
imports, statistics.....	737
reports semimonthly.....	40

	Page.
Hops—	
consumption by brewers 1910-1921.....	636
exports, statistics.....	747, 749, 752, 761
imports, statistics.....	741, 749, 754
prices, by States and by months.....	636-637
production and value, by States.....	636
statistics, acreage, production, value, etc.....	635-637
trade, international, by countries, 1910-1921.....	635, 637
world production, 1895-1920, and by countries.....	635
Horse—	
American utility type.....	28
feeds, kinds and amounts per animal, by States.....	840
labor—	
cost, as factor in wheat profits.....	116, 117
factor in wheat production.....	120
Horses—	
colts, on farms, January 1, 1920.....	471
cost of keeping on farm.....	805
exports, statistics.....	743, 757
imports, statistics.....	737, 764
number—	
and value, January 1, 1920.....	470
in world countries.....	675-680
on farms, January 1, 1920.....	472, 474
prices.....	684-686, 689, 734
receipts at principal markets.....	686
statistics, number, value, imports and exports.....	684-689
Horticultural Board, receipts in 1921.....	69
Husking, corn, from stalk, notes.....	178, 192
Idaho, wheat production periods.....	90, 94
Illinois—	
cattle industry, historical notes.....	233-235
wheat production periods.....	88, 93, 94, 96
Implements, farm—	
manufacture, 1920.....	795-798
value on January 1, 1920.....	494
Imports—	
agricultural products, statistics.....	737-743, 753-756, 769
barley of world countries, 1911-1920.....	558
cattle, 1918-1920.....	737, 764
coffee, 1909-1920, by countries.....	669
corn—	
for 1914.....	205
of world countries, 1909-1920.....	519
cotton.....	393
cotton, 1866-1921.....	610, 616
cottonseed oil—	
by countries, 1909-1920.....	618
1913-1920, world countries.....	800
flaxseed of world countries, 1911-1920.....	574-575
hides and skins, 1909-1920, world countries.....	681
hogs, 1918-1920.....	737
hops, 1910-1921.....	636
horses, 1918-1920.....	737
linseed oil, 1913-1920, world countries.....	803
meat and meat products, 1911-1920, world countries.....	682
mutton, 1910-1920, world countries.....	718
oats of world countries, 1911-1920.....	551
olive oil, 1913-1920, world countries.....	801
peanut oil, 1913-1921, world countries.....	802
peanuts, by countries.....	646-647
pork, 1910-1920, world countries.....	729
potatoes—	
for 1866-1921.....	583
world countries.....	590
rice of world countries, 1909-1920.....	579
rice of world countries 1911-1920.....	565

	Page.
Imports—Continued	
sheep, 1918-1920	737
swine, 1918-1920	737
tea, by countries	668
vegetable oils, 1912-1921	799
wheat—	
for world countries, 1909-1920	538
graphic showing	156, 157
wool, 1909-1920, world countries	722
Income—	
farm, nature and uncertainty	1-6
national, farmers' percentage	1, 2
India—	
agricultural production, comparison with United States	407
cotton production	325
rubber, trade, international, 1909-1920, by countries	673
Indiana, wheat production periods	89, 91
Insect, pest control studies	28
Insecticide act, administration	32
Insects, corn enemies, injuries, causes, and control	186-187
Inspection—	
food service work	40
meat, statistics, 1907-1921	735-736
wheat, discussion of details	129-130
Insurance, crop, discussion	121
Interest rates—	
on short-time loans, by States	778
to farmers in Southern States	368
Iowa—	
crop selection, changes	104
growing season and frost	106
leading corn State, 1911-1920	198
wheat production, periods	88, 96
Ivory, vegetable, import, statistics	739, 749
Joint worm, damage to wheat	108, 109
Judgment notices, number filed during year	33
Jute, imports, statistics	739, 753, 754, 766
Kafir—	
acre, labor and material requirements, by States	812
acreage in South, 1879-1919	337
cost of production per acre by States	812, 826
Kafirs, statistics, summary, 1919, 1920, 1921	771
Kansas City—	
freight rates on wheat	135
prices of wheat, discounts by grades	144, 145
Kansas—	
loans to farmers, kinds of security	121
wheat—	
movement, remarks	133
productive periods	90, 91, 92, 93, 94, 96
Karochi, freight rates on wheat	136
Kids, number on farms and ranges, January 1, 1920	486
Labor, chore hours per farm, by States	841
cost—	
and requirements in baby beef production	267-268
in cotton production	361, 362
distribution by seasons in Cotton Belt	345
expenditure for wages, per farm, in 1919	496
farm—	
as factor in cost of wheat production	120
power, cost comparisons of tractor and horse	805, 807
relation to crop selection	105

Labor—Continued.	Page.
farm—Continued.	
supply and demand, 1919-1922	786
wages, 1910-1921	784-785
horse, chore hours per farm, by States	841
influence on cost of corn production, studies	192-193
wages on farms, comparison with corn prices, 1910-1921	193
wheat growing, as factor in profit making	115-118
Laborers, farm—	
decrease in number	5, 12
hiring periods and percentages	785
Lambs—	
fattening, cost per head, by States	842-844
number on farms, January 1, 1920	485
registered, on farms January 1, 1920	484
Land—	
area in United States and uses and conditions	23
banks, interest on farm loan bonds	14
cost as factor in wheat profits	116, 118
farm, location and description	422
improved—	
in farms	23, 423
operation by tenants and croppers	499
in harvested crops	424
rents increase	10-11
utilization study	22-24
Lands—	
acreage per capita	431
crop, relation to population, 1850-1920	431
farm—	
increase in value	3, 4, 10, 24
prices for wheat growing, note	118
value per acre, January 1, 1920	492
irrigated and irrigable, acreage in 1919	429
plow, value, 1919-1922, by States	786
relief map of United States	417
use in 1920 and possible use	430
wet, acreage needing drainage	428
Lard—	
exports, statistics	744, 751, 758, 759
prices	731, 732
Laws—	
administration by Agriculture Department	31-33
violation, cases in department	33
Leaf spot, angular, cotton disease, control	357
Leaf worm, cotton, habits and control	354
Legislation, aid for farmers	13-15
Legumes—	
acreage in South, 1879-1919	337
annual, cut for hay, acreage in 1919	453
growing in Cotton Belt	346
hay production in 1919, by States	264
use in rotation with wheat	97
LEIGHTY, C. E.—	
C. R. BALL, O. C. STINE, and O. E. BAKER, article on "Wheat production and marketing"	77-160
C. W. WABURTON, O. C. STINE, and O. E. BAKER, article on "The corn crop"	161-226
Lemons—	
exports, statistics	746
imports, statistics	740, 755
Lettuce, shipments, 1919-1921, by States	653
Library, number of books and increase during year	29
Licorice root, imports, statistics	741, 749
Light, relation to plant growth, studies	27
Linseed—	
exports, statistics	761
imports, statistics	767

Linseed—Continued.

oil—	Page.
exports, 1913-1920, world countries	843
imports, 1913-1920, world countries	863
production, imports and exports, 1912-1921	799
Lint, cotton—	
five important types	328
production, cost variations	358-362
Linters—	
consumption, 1909-1921	383, 395
production in 1899-1921, and uses	381-382
removal from cottonseed	376, 381
supply and distribution, 1905-1921	393
Live stock—	
farm, number and value, January 1, 1920	470
feed, use of corn	165
marketings, 1900-1921	734
owners' indemnity for tuberculous cattle	45
prices—	
by age or class, 1916-1922	734
encouragement	13
products, sales, by monthly percentage	779
sales—	
by farmers, monthly percentage	779
by farmers' per cent of all receipts, by States	780
slaughter under Federal inspection	735
statistics, 1921	675-736
value on farms, January 1, 1920	495
values by States, comparisons	733
Liverpool—	
freight rates on wheat	136, 137
prices of wheat	145, 146
Loans, farmers—	
in Southern States, forms and rates	367-369
interest rates, by States	778
Louisiana—	
cane-sugar production, 1911-1921	659
interest rates on loans to farmers	368
pink bollworm, control work	353
Lumber—	
exports, statistics	745, 756, 763
imports, statistics	740, 756, 768
Macaroni, etc., imports, statistics	755
Machinery, farm—	
manufacture, 1920	796-797
value, January 1, 1920, and per farm	494
Madison, forest-products laboratory	53
Man labor—	
cost as factor in wheat profits	116
factor in wheat production	120
Manila hemp, imports, statistics	739, 753, 754
Maple products, statistics, production, yield, price, etc	665-667
Marketing—	
beef cattle, methods	277-280
corn—	
crop, prices, etc., factors governing	195-208
movement from farm	199-202
cotton, and prices	385-390
grain, studies	21-22
importance	18-19
problems, studies	23
research work in	19-21
wheat, and production of wheat, article by C. R. Ball, C. E. Leighty, O. C. Stine, and O. E. Baker	77-160

Marketing—Continued.

	Page.
wheat—	
discussion of factors, etc.....	122-146
freight rates.....	135-137
movements from farm and exports.....	131-134
receipts and exports, graph.....	132
remarks.....	122, 130
routes in 1839.....	88
Markets—	
Bureau—	
consolidation.....	16
contract designation by Secretary.....	34
receipts in 1921.....	69
cattle, receipts, location, etc.....	280-281
corn, prices, etc., factors governing.....	195-208
cotton—	
classification and location.....	383-385
prices by months.....	613-615
spot, location and functions.....	383-385
news service work.....	40
wheat, principal in 1869.....	92
Marquis wheat, popularity, note.....	123
Meade cotton, substitute for Sea Island.....	372
Meal—	
cottonseed, manufacture.....	376
exports, statistics.....	747, 751
imports, statistics.....	740, 741
Meat—	
animals. <i>See</i> Animals, meat; Beef cattle; Calves; Hogs; Lambs;	
Sheep.	
consumption, per capita, 1900-1921.....	683
inspection—	
law, administration.....	32
statistics, 1907-1921.....	735-736
work and reports on meat trade.....	40
statistics, production, imports, exports, and consumption, 1900-1921.....	683
supply, relation to corn production.....	225-226
Meats—	
exports—	
statistics.....	744, 750, 751, 758, 759
world countries, 1911-1920.....	682
imports—	
statistics.....	733
world countries, 1911-1920.....	682
prices.....	730-731
quantity imported and condemned, 1914-1921.....	736
statistics, production and exports, 1909-1921.....	75, 76
MELOY, G. S., A. M. AGELASTO, C. B. DOYLE, and O. C. STINE, article on "The cotton situation".....	323-406
Michigan, wheat production periods.....	88, 91, 93
Middlings, prices at Minneapolis, 1916-1921, by months.....	603
Milk—	
cows. <i>See</i> Cows, milk.	
evaporated, etc., exports, statistics.....	743
imports, statistics.....	737
prices, 1920-1921.....	701-702
uses, 1919-1921.....	707
Mills—	
cotton consumption, 1876-1920.....	392, 393, 396
cottonseed oil, products from seed.....	376, 399
Milo—	
acre, labor and material requirements, by States.....	812
cost of production per acre, by States.....	812, 826
Milwaukee, wheat market.....	92
Minneapolis—	
milling center and wheat selling.....	143
prices of wheat, discounts by grades.....	144
Minnesota wheat production periods.....	90, 91, 92, 93, 94, 96

	Page.
Mississippi—	
interest rates on loans to farmers.....	368
Valley, wheat production, note.....	94
Missouri, wheat production periods.....	88, 94
Mohair, production and value, 1919.....	486
Moisture, relation to wheat production.....	107-108
Molasses—	
exports, statistics.....	748, 749
imports, statistics.....	742, 749, 754, 757
Montana, wheat production.....	92
Mortgages, farm, extension.....	15
Motor trucks—	
cost of operation in Corn Belt.....	807
hauls, distance, load, and cost, 1906, 1918.....	791
number on farms, by States.....	789
Mule colts. on farms, Jan. 1, 1920.....	471
Mules—	
exports, statistics.....	743
number—	
and value, Jan. 1, 1920.....	470
on farms, Jan. 1, 1920.....	473
numbers in world countries.....	675-680
prices.....	684-686, 689, 734
statistics, number, value, imports, and exports.....	684-689
Muskmelons, market, acreage, 1919.....	460
Mutton—	
exports, 1910-1920, world countries.....	718
imports, 1910-1920, world countries.....	718
Naval stores, exports, statistics.....	745, 762
Navel orange, industry development.....	19-21
Nebraska—	
leading corn State.....	198-199
wheat-production periods.....	90, 91, 93, 94, 96
Negro, farmers, aid by extension workers.....	36
Negroes, owners of farms, January 1, 1920.....	501
New Mexico, wheat production.....	88, 90
New Orleans, freight rates on wheat.....	135
New York—	
freight rates on wheat.....	135-137
prices of wheat.....	145, 146
wheat-production periods.....	87, 88, 89
Nitrogen, atmospheric, fixing.....	27
North Carolina, interest rates on loans to farmers.....	368
North Dakota—	
growing season and frost.....	106
loans to farmers, kinds of security.....	121
wheat-production periods.....	94, 96
Nursery stock—	
exports, statistics.....	749
imports, statistics.....	749
Nuts—	
acreage and value in 1919.....	463
exports, statistics.....	747, 749
imports, statistics.....	741, 749, 753, 767
Oats—	
acre, labor and material requirements, by States.....	814
acreage—	
comparison with wheat.....	99
graphic showing.....	102
in 1919.....	441
consumption in world countries, 1909-1918.....	580
cost of production per acre by States.....	814, 831
exports—	
of world countries, 1911-1920.....	551
statistics.....	746
growing in central Northwest.....	104, 105
imports—	
world countries, 1911-1920.....	551
statistics.....	740, 753

	Page.
Oats—Continued.	
losses, causes and extent, 1909-1920	546
prices at principal markets	546-547
sowing dates, by States	775
statistics—	
acreage, production, and exports, 1910-1921	71, 72, 74
acreage, production, value, etc.	539-551
summary, 1919, 1920, 1921	770
value of crop, comparison with wheat	80
weight per bushel, estimates 1902-1921	778
world production and exports	781
yield and value per acre and price	544
Ocean freight rates—	
for grain	207-208
on wheat	136, 137
Ohio—	
cattle industry, historical notes	233
Valley, wheat production	95
wheat production periods	87, 88, 89, 91, 93
Oil—	
cake—	
exports, statistics	747, 751, 761
imports, statistics	741
cottonseed, manufacture and value	376, 399-400
<i>See also</i> Cottonseed oil.	
linseed, prices in New York in 1910-1922	573
mills, number in Cotton Belt, and products	376
soy bean, imports, statistics	767
trade, international, 1909-1920, by countries	670
Oil-cake meal, trade, international, 1909-1920, by countries	670
Oil meal, prices at New York, 1910-1922	604
Oils—	
exports, statistics	744, 761
vegetable—	
exports, statistics	747, 749, 762
imports, statistics	741, 749, 767
statistics, production, exports, imports, and international trade	799-803
Oklahoma—	
cotton growing, development	334
interest rates on loans to farmers	308
wheat production	96
Oleo oil, etc.—	
exports, statistics	758
imports, statistics	738
Oleomargarine production, 1918-1920	705
Olive oil—	
exports, 1913-1920, world countries	801
imports—	
statistics	741, 754, 767
world countries, 1913-1920	801
production, imports, and exports, 1912-1921	799
Olives, imports, statistics	740
Onions—	
cost of production per acre	829
imports, statistics	742, 755
prices, by months and by States, 1910-1921	650
production, acreage, and yield, by States	650
shipments, 1917-1921, by States	651
statistics, acreage, production, prices, etc.	72, 650-651
Opium, imports, statistics	754
Orange, navel, industry development	19-21
Oranges—	
exports, statistics	746, 760
imports, statistics	740, 755, 757
production and value, 1915, 1921	633
Orchards, losses from codling moth	41
Oregon, wheat production periods	88, 89, 90, 91, 94, 96

	Page.
Packers—	
act, administration	33-34
supervision, by Government act	14
Packing-house products—	
exports, statistics	744, 749, 750, 751
imports, statistics	738, 749
Palm oil, imports, statistics	741
Palouse, wheat district, note	96
Paper, making in Alaska	59-60
Pastures, improved, in farms	425
Peach trees, acreage in 1919	466
Peaches—	
prices, by States and by months	630-631
production—	
and prices, by States	630-631
in 1919	463
shipments, 1917-1921, by States	631
statistics, production, prices, shipments, etc	630-631
Peanut oil—	
exports, 1913-1920, world countries	802
imports, 1913-1920, world countries	802
production, imports, and exports, 1912-1921	799
Peanuts—	
acreage—	
in 1919	455
in South, 1879-1919	337
exports, statistics	741, 747
imports, statistics	741
statistics—	
acreage, production, value, etc	645-646
production, 1910-1921	73
trade, international, by countries	646-647
Pear trees, acreage in 1919	468
Pears—	
prices, by States and by months	632, 633
production and prices, by States	632
shipments, by States	633
statistics, production, prices, shipments, etc	632-633
Peas—	
cost of production per acre	829
field, acreage in 1919	454
market, acreage in 1919	461
world production and acreage, by countries	642
Pecans, acreage in 1919	468
Pennsylvania, wheat production periods	88
Pests—	
cotton, description and control	349-354
eradication—	
cooperation importance	46
need of research	42-44
insect, control studies	28
Philippines, sugar production, 1856-1921	657
Phosphoric acid, manufacture, new process	26
Pigs, number on farms in 1919	483
Pine, white, blister rust destructiveness	42
Pineapples, imports, statistics	740
Plant—	
diseases, control work	41
growth, relation to length of day	27
quarantine act, administration	32
Planting—	
corn, dates, in various regions	183, 184
dates for certain crops	775-776
Plum trees, acreage in 1919	467
Plums and prunes, imports, statistics	755
Population—	
country, number and per cent of total, January 1, 1920	502
rural and urban, distribution	415

	Page.
Population—Continued.	
urban, number and per cent of total, January 1, 1920.....	501
village, number and per cent of total, January 1, 1920.....	503
Pork—	
cost of production per 100 pounds, by States.....	845
exports—	
statistics.....	744, 750, 751, 759
world countries, 1910-1920.....	729
imports, world countries, 1910-1920.....	729
production, labor, and material requirements for 100 pounds.....	845
Porto Rico—	
soil survey, areas mapped.....	27
sugar production, 1856-1921.....	657
Potatoes—	
acre, labor, and material requirements by States.....	810-811
acreage in 1919.....	456
condition for 1900-1921.....	585
cost of production per acre, by States.....	810-811, 823-824
imports, statistics.....	742, 754
losses, causes and extent, 1909-1920.....	587
prices, by States and by months.....	588, 587-590
shipments, by States, 1917-1921.....	591
statistics—	
acreage, production, value, etc.....	71, 72, 581-591
summary, 1919, 1920, 1921.....	770
stocks on January 1 and prices, 1915-1922.....	588
sweet. (<i>See</i> Sweet potatoes.)	
trade, international, exports, imports, etc.....	590
value of crop, comparison with wheat.....	80
world production and exports.....	781
yields by countries and by States.....	583, 585
Poultry—	
number and value, January 1, 1920.....	470
number on farms, January 1, 1920.....	487
Power, farm work, cost data.....	805-807
Precipitation—	
annual average.....	418
relation to wheat production.....	107-108
Prices—	
beef cattle, at Chicago, monthly averages.....	292-304
cattle, comparison with general commodity prices.....	304-305
corn—	
annual variations, studies.....	213-215
fixing on Chicago market.....	217
on farms, December 1, 1921, with comparisons.....	209-212
seasonal fluctuations, studies.....	212-213
war period, with comparisons.....	215-217
cotton—	
and supply in 1921.....	404
variations.....	385-387, 388-390
farm supplies, graphic showing of changes.....	119
farmers' supplies, table, 1909-1921.....	782-783
food crops, conditions determining.....	2-3
market, for corn, determination at Chicago.....	217
reduction for 10 leading crops.....	12
variation for wheat.....	139-141
wheat—	
factors in determination.....	122, 137-146
fixing on Liverpool market, note.....	217
fluctuation.....	139-142
fluctuation in Civil War and World War.....	147
on principal markets.....	143-146
relation to other prices in 1921, remarks.....	141
Primrose, growth, relation to length of day, illustration.....	27
Prune trees, acreage in 1919.....	467
Prunes—	
exports, statistics.....	760

Publications—	Page.
Division, receipts in 1921.....	69
periodical, in service work.....	40
Pulpwood—	
exports, statistics.....	746, 749, 756
imports, statistics.....	740, 749, 756, 768
international trade, 1909-1920, by countries.....	674
supplies in Alaska.....	59-60
Railroads, freight rates for grain.....	207-208
Railway freight tonnage, farm products and other, 1916-1921.....	790
Rain, relation to wheat production.....	107-108
Rainfall—	
Cotton Belt.....	341
effect on corn yield.....	184-185
July, relation to corn yield, 1888-1921.....	184
Raisins—	
exports, statistics.....	746
imports, statistics.....	740, 755
Range—	
cattle, development of industry.....	235-238
western, carrying capacity for cattle and horses.....	245-253
Ranges, cut-over pine lands, grazing capacity.....	255-256
Reaper in use in harvesting flax and buckwheat.....	89
wheat, development and use.....	87, 89, 92
Red River Valley, wheat production.....	93, 96
Regulatory work, relation to research work.....	33
Rent, cost as factor in wheat production.....	120
Rents, farm lands, increase.....	10-11
Research—	
agricultural, relation to marketing.....	19-21
department, object and cost.....	25-29, 67
work—	
relation to regulatory work.....	33
value as national investment.....	28-29
workers, need of better salaries.....	62-64
Rice—	
acreage—	
in 1919.....	446
in South, 1879-1919.....	337
consumption in world countries, 1909-1918.....	580
exports, statistics.....	747, 749, 752
imports, statistics.....	741, 749, 754
losses, causes and extent, 1909-1920.....	579
statistics—	
acreage, production, value, etc.....	71, 72, 576-579
summary, 1919, 1920, 1921.....	770
world countries—	
exports, 1909-1920.....	579
imports, 1909-1920.....	579
world production and exports.....	781
yield and value per acre, and price.....	578
Road—	
construction, record under Federal-aid road act.....	47-51
law, 1921, appropriation and provisions.....	48-49
projects, Federal aid, mileage and cost.....	47-48
work, use of surplus war materials.....	50, 51
Roads—	
Bureau, work in Alaska.....	60
construction—	
investigation.....	28
research problems.....	50
Federal-aid—	
expenditures, 1921.....	70
law, construction.....	47-51
maintenance, difficulties.....	48, 50

Roads—Continued.	
materials—	Page.
investigations.....	28
transportation, improvement 1921.....	48
Rodents, eradication work.....	46
Root rot, cotton, cause and results.....	356
Root-knot, cotton, cause and prevention.....	356
Rosin—	
exports, statistics.....	745, 762
trade, international 1909-1920, by countries.....	671
Rotation—	
crop, use in control of cotton diseases.....	356, 357
wheat, systems for several climates.....	97
Rotations, corn, with other crops.....	176-178
Rots—	
corn—	
injuries to corn, causes and control.....	186
investigations.....	27
cotton-root, cause and results.....	256
Roughage, marketing through beef cattle.....	227-228
Rubber, india, international trade, 1909-1920, by countries.....	673
Rural life, standards.....	24, 66
Russia, agricultural production, comparison with United States.....	407
Rust—	
cotton, cause and control.....	356
damage to wheat.....	110
effect on quality of wheat.....	127
wheat, spread by barberry.....	45
Rye—	
acre, labor and material requirements, by States.....	814
acreage—	
in 1919.....	443
comparison with wheat.....	99
graphic showing.....	103
consumption in world countries, 1903-1918.....	589
cost of production per acre, by States.....	814, 822
exports, statistics.....	746
prices at Chicago.....	564
statistics, acreage, production, value, etc.....	71, 72, 74, 559-565
value of crop, comparison with wheat.....	80
world countries—	
exports, 1911-1920.....	565
imports, 1911-1920.....	565
world production and exports.....	781
yield and value per acre, and price.....	563
Sago, imports, statistics.....	741, 749
Sales, farm products, percentage of receipts by classes.....	779, 780
Salaries, professional, standards outside department.....	62-64
Scab, damage to wheat.....	110
Schools—	
aid by department.....	30
receipts from forests.....	70
rural, study courses.....	30
Scientific—	
work, director, appointment.....	29
workers, need for better salaries.....	62-63
Scientists, trained, value to Nation.....	64
Sea-island cotton, description.....	327, 329
Secretary of Agriculture. (<i>See</i> Agriculture.)	
Seed—	
alfalfa, prices at Kansas City.....	608
clover—	
statistics, production, 1910-1921.....	73
statistics summary, 1919, 1920, 1921.....	771
<i>See also</i> Clover seed.	

Seed—Continued.

	Page.
cost—	
as factor in wheat production	120
as factor in wheat profits	117
cotton, mixing as cause of deterioration of crop	401
quantity per acre, various crops	776
timothy. (<i>See</i> Timothy seed.)	
wheat, treatment for bunt	110
Seed-grain, loans to farmers in 1921	70
Seeds—	
exports, statistics	748, 749, 761
imports, statistics	742, 749, 767
Self binder, wheat, use in threshing	92, 93
Self-raker reaper. <i>See</i> Reaper.	
Semolina, making and use	124
Separator, grain, use in wheat harvest	92
Sheep—	
condemnation at slaughter, 1907-1921	736
exports, statistics	743
imports, statistics	737
number and value, January 1, 1920	470
number on farms, January 1, 1920	483
prices	710, 711-713, 734
receipts at stockyards, and slaughter, 1915-1921	715-717, 735
registered, on farms, January 1, 1920	484
statistics, number, value, imports and exports	710-713
value—	
comparison with cattle and hogs	228
with wool, comparison with cattle and hogs	228
world countries, number	675-680
Sheepskins, imports, statistics	733, 765
SHEETS, E. W., O. E. BAKER, C. E. GIBSON, O. C. STINE, and R. H. WILCOX, article on "Our beef supply"	227-232
Shorthorn cattle, distribution	243
Sickle, use in wheat harvest	87, 88
Silage—	
acre, labor and material requirements, by States	808
acreage of crops cut for	179
corn with annual acreage for use	164-165, 178
cost of production per acre, by States	808, 832
crops cut for, acreage in 1919	436
production, 1919, by States	262
Silk—	
exports, statistics	743
imports, statistics	737, 749, 753, 764
world production, 1909-1920, by countries	674
Silos, early use, and increase	180
Sirup—	
cane, production, by States	660
maple—	
prices by months	667
production, 1839-1921, and by States	665-666
sorghum—	
production and value by States	667
statistics, production, 1910-1921	73
Sisal grass, imports, statistics	739, 766
Skins—	
exports, 1909-1920, world countries	681
imports, 1909-1920, world countries	681
horse—	
exports, statistics	744
imports, statistics	738
Smith-Hughes Act, aid to agricultural education	30
Smith-Lever Act, funds expended in 1921	70

	Page.
Smut—	
corn, loss from, 1917-1920.....	185
damage to wheat.....	110
injury to corn, causes, and control studies.....	185
Snaps, cotton, description.....	381
Snow, relation to wheat production.....	107-108
Soil—	
depletion by corn cropping, suggestions to growers.....	224
fertility, relation of cattle industry.....	228
regions, descriptions.....	420
regions of the Cotton Belt, map.....	339
survey, area mapped.....	27
Soils—	
Bureau of, receipts in 1921.....	69
colloidal particles, separation method.....	26
Cotton Belt.....	340-341
influence on corn production and yield.....	181
Sorghum, sirup, production and acreage, by States.....	667
Sorghums—	
forage or fodder, acreage in 1919.....	445
grain—	
acreage, in 1919.....	444
acreage in South, 1879-1919.....	337
cost of production per acre, by States.....	812, 826
labor and material requirements per acre, by States.....	812
statistics, acreage, production, value, etc.....	71, 72, 614-615
South America, cotton production.....	327
South Carolina interest rates on loans to farmers.....	368
South Dakota, wheat-production periods.....	94, 96
Southern States, cotton crop importance.....	323-324
Soy-bean oil, imports, statistics.....	741, 747, 767
Spices—	
exports, statistics.....	748, 749
imports, statistics.....	742, 749
St. Louis, prices of wheat discounts by grades.....	144
Standards, grade for cotton.....	379
Starch—	
imports, statistics.....	742, 749
exports, statistics.....	748, 749
States Relations Service—	
extension work in Alaska.....	60
receipts in 1921.....	69
Statistics—	
agricultural—	
data, trends, 1899-1921.....	787
miscellaneous.....	770-803
crops other than grain.....	581-674
farm animals and their products, 1921.....	675-736
grain crops of 1921.....	507-580
live stock, 1921.....	675-765
tables and charts, use suggestion.....	112
truck crops, 1818-1921.....	647-655
use by farmers in seeking profits.....	119
vegetable oils, production, exports and imports, etc.....	799-803
world production and exports of 10 principal crops.....	781
Staves, exports, statistics.....	745
Steers—	
beef, conformation, requirements.....	306-307
fattening—	
in Corn Belt, roughage requirements.....	261
in Cotton Belt, feed requirements.....	257-258
feeder, conformation, markets, and shipments.....	282-286
pinney-woods, value for lumbering in pine woods.....	255
prices, comparison with beef prices.....	297-300
Stem rust, wheat, spread by barberry.....	45

STINE, O. C.—	Page.
A. M. AGELASTO, C. B. DOYLE, and G. S. MELOY, article on "The cotton situation".....	323-406
C. E. LEIGHTY, C. W. WARBURTON, and O. E. BAKER, article on "The corn crop".....	161-226
C. R. BALL, C. E. LEIGHTY, and O. E. BAKER, article on "Wheat production and marketing".....	77-160
E. W. SHEETS, O. E. BAKER, C. E. GIBSON, and R. H. WILCOX, article on "Our beef supply".....	227-322
Stockyards act, administration.....	33-34
Storage—	
cold, space by States, 1921.....	793
grain, capacity of mills and elevators, by States, 1918.....	794
Strawberries—	
acreage in 1919.....	469
prices at principal markets.....	653
shipments, 1917-1921, by States.....	653
Sugar—	
beet—	
production, 1861-1922.....	657-659
world production, by countries.....	663
cane—	
production, 1856-1922.....	657
world production, by countries.....	663-664
crops, acreage in 1919.....	457
exports, statistics.....	748, 749, 752, 757
grape, exports, statistics.....	751, 760
Hawaii production.....	657, 661
imports, statistics.....	742, 749, 754, 757, 767
maple—	
prices, by months.....	667
production, 1839-1921, by States.....	665-666
production, 1856-1922.....	657
statistics—	
exports, 1910-1921.....	74
production, by-products, etc.....	651-664
summary, 1919, 1920, 1921.....	771
supply, per capita and total.....	660
trade, international, 1909-1920, by countries.....	662
world production and exports.....	781
Supplies, cost on farms, comparison with prices of cotton, 1910-1921.....	364-365
Surplus crops, utilization studies.....	28
Surveys, cotton-production cost, charts.....	358-364
Sweet corn—	
cost of production per acre.....	829
market acreage in 1919.....	462
Sweet potatoes—	
cost of production per acre.....	829
prices, by States and by months.....	591-594
production and value by States.....	591-592
shipments, by States, 1917-1921.....	592
statistics, acreage, production, value, etc., 1849-1921.....	71, 72, 591-595
yield and prices by States.....	593
Swine—	
exports, statistics.....	743
imports, statistics.....	737
value on farms, 1910-1921.....	163
<i>See also</i> Hogs.	
Sydney, freight rates on wheat.....	186
Tallow—	
exports, statistics.....	744, 750
imports, statistics.....	738
Tanning materials—	
exports, statistics.....	749
imports, statistics.....	739, 745, 749

Tea—	Page.
imports, statistics	742, 749, 753, 754, 767
trade, international, 1900-1920, by countries	608
Teachers, aid by department publications	30
Telephones—	
number of farms reporting, and per cent of all farms	506
use on farms, statistics	788
Tenancy, farm	498
Tennessee, interest rates on loans to farmers	368
Texas—	
cattle industry, historical notes	233
cotton—	
growing practices	347
growing, development	331-334
planting and picking dates	342
interest rates on loans to farmers	368
pink bollworm, introduction and spread	352-353
wheat production periods	89, 90, 94, 96
Threshing—	
cost—	
as factor in wheat production	120
as factor in wheat profits	116
wheat, illustration	92
Tick, cattle, eradication progress	44
Ties, railroad, exports, statistics	745, 763
Timber—	
exports, statistics	746, 756, 763
growing—	
forest lands	57
on private land, encouragement	54
imports, statistics	740
National forests, uses, statistics	792
resources, investigations	54
Timothy—	
acreage in 1919	448
and clover, mixed, acreage in 1919	449
seed—	
exports, statistics	748
prices, by months	606, 607
production, labor, and material requirements per acre, by States	816
receipts at Chicago, 1910-1922, by months	608
Tobacco—	
acre, labor, and material requirements, by States	812
acreage in 1919	416
cost of production per acre, by States	812, 826
exports, statistics	748, 749, 752, 757, 762
imports, statistics	742, 749, 753, 754, 757, 768
losses, causes and extent, 1909-1920	622
planting dates, by States	775-776
prices, by States and by months	621-623
production, acreage and value by States	621
statistics—	
acreage and production, 1910-1921	71, 73
acreage, production, value, etc	619-624
summary, 1919, 1920, 1921	770
trade, international, by countries	624
value of crop, comparison with wheat	80
world production—	
and exports	781
by countries	619-620
Tomatoes—	
cost of production per acre	829
market, acreage in 1919	462
prices, by States and by months	652
production, acreage, and yield, by States	657
shipments, 1917-1921, by States	652
statistics, acreage, production prices, etc	651-652

	Page.
Tonnage, railway freight, 1916-1921.....	790
Tools, farm, value, January 1, 1920, and per farm.....	494
Traction engines—	
steam, manufacture, 1920.....	795
use in threshing.....	92
Tractor—	
cost—	
as factor in wheat profits.....	117
of data from.....	805-807
work, farms of various sizes.....	806
Tractors—	
farm, power cost comparison with horse.....	805-807
gas, manufacture, 1920.....	795
number of farms reporting, and per cent of total.....	505
number on farms, by States.....	789
Trade—	
routes in wheat shipments.....	156, 157
wheat, international showing.....	156, 157
Traffic, tests of experimental roads.....	50
Transportation—	
cotton, practices.....	390
freight rates in wheat marketing.....	135-137
importance to farmers.....	9-10
rail and ocean rates, for corn and wheat.....	207-208
wheat—	
marketing.....	88, 90, 92
routes in 1839.....	88
Trees, apple—	
acreage in 1919.....	464
number of bearing age, acreage in 1919.....	464
Truck crops—	
cost of production per acre.....	829
statistics, acreage, production, value, etc.....	647-654
Tuberculosis, animal, eradication.....	44-45
Turkeys, prices, 1909-1921.....	709
Turnips, prices, by months.....	652
Turpentine—	
exports, statistics.....	745, 762
trade, international, 1909-1920, by countries.....	672
United States—	
agricultural production, preeminence.....	407
agricultural products, exports, comparison with other nations.....	407
Upland cottons, description.....	329-330
Utah wheat production periods.....	88, 90
Vanilla beans, imports, statistics.....	742, 749
Veal, consumption per capita, 1907-1921.....	316
Vegetables—	
exports, statistics.....	748, 749
home value in 1919.....	458
imports, statistics.....	742-743, 749
markets, receipts 1916-1921.....	652-656
sale, acreage in 1919.....	459
Vegetation, native of United States.....	421
Virginia—	
cattle industry, historical notes.....	232
wheat production, early period.....	87
wheat production periods.....	87, 88
Vocational Education, Federal Board, cooperation.....	30
Wages, farm—	
comparison with prices of cotton, 1910-1921.....	364-365
graphic showing of changes.....	119
influence on cost of corn production.....	192-193
labor, 1910-1921.....	784-785
reduction disproportionate.....	5, 12

	Page.
Wagon hauls, distance, load, and cost, various sections, 1906-1918.....	791
WALLACE, HENRY C.—	
report as Secretary of Agriculture, 1921.....	1-76
Secretary, foreword.....	111
Walnuts—	
acreage, in 1919.....	468
imports, statistics.....	741, 755
War—	
Finance Corporation, extension.....	14
materials, surplus, transfer to Agriculture Department.....	50, 51
World—	
effect on United States wheat production.....	85-87, 96
<i>See also</i> World.	
WARBURTON, C. W., C. E. LEIGHTY, O. C. STINE, and O. E. BAKER, article on "The corn crop".....	161-226
Warehouse—	
act, benefit to cotton farmers.....	378
grain, value to farm credit.....	134
receipts, value as security on loans.....	378
Warehouses, location in Cotton Belt, and use.....	376-378
Warehousing—	
cooperative, protection of cotton crop.....	403-404
cotton.....	376-378
Washington, wheat production periods.....	91, 92, 94, 96
Watermelons—	
cost of production per acre.....	829
market, acreage in 1919.....	461
shipments, 1919-1921, by States.....	653
Watersheds, protection in forests.....	53
Wax, vegetable, imports, statistics.....	743, 749
Weather—	
Bureau—	
receipts, 1921.....	69
stations in Alaska.....	60
forecast, service work.....	39
map, daily service.....	40
publications.....	40
relation to wheat growing.....	107-108, 122-124
Western range, beef-cattle industry.....	245-253
Wheat—	
acre, labor and material requirements, by States.....	813
acreage—	
and yield, 50-year record.....	85-110
increase in 25 years.....	149-150
percentage by States, etc.....	98, 99
area of infestation by Hessian fly.....	109
areas of study of production cost.....	111
black stem rust, spread by barberry.....	45
classification—	
discussion of subclasses.....	129
standards, classes and their areas.....	122-126
climate suitable to growing.....	81
Common White, production, yield, and varieties.....	123, 126
consumption—	
domestic and exports.....	151-155
in world countries, 1909-1918.....	580
cost—	
of production and price in 1919.....	118, 119
of production per acre, by States.....	813, 820-821
per bushel as factor in profit.....	114-115
countries producing surplus.....	81
cropping systems.....	97-103
damage by fungous diseases.....	110
distribution of crop.....	151-155

Wheat—Continued.

exports—	Page.
comparison with other crops	80
percentage of crop, graphic showing	154
review from 1836	152-155
statistics	746, 752, 761
world countries, 1909-1920	538
farmers growing and harvesting, percentages by States	78
freight rates, rail and ocean	207-208
grades and prices on principal markets	143-145
growing—	
historical review by decades in United States	87-96
map showing principal regions	78
organization for profit	104-106
season and frost	106
Hard Red—	
spring, production and use	124
winter, production and varieties	123, 125
hauling, cost per ton per mile	791
implements and machinery for growing	87-88, 89, 92, 93
importance as a crop	77-80
imports—	
statistics	740, 753, 754
world countries, 1909-1920	538
inspection, discussion of details	129-130
international trade—	
discussion	155
graphic showing	156, 157
killing in winter	108
losses—	
by insects	108-109
causes and extent, 1909-1920	529
marketing—	
freight rates	135-137
movement from farm, remarks	131-133
of, discussion of factors, etc	122-147
routes in 1889	88
season for principal markets	132-133
official standards, discussion of classes and areas	122-126
place in World War	79
price—	
changes, graphic showing	119
on farm, statistics for December 1, 1921	138
purchasing power, in terms of 1919 dollar	148
relation to world production of wheat	81
prices—	
at principal markets	143-146, 531-532
comparisons for 1921	147
factors in making, etc	137-146
on farm, monthly average for 1912-1921	138
variation on the farm	139-141
world markets	145, 146
production—	
and marketing, article by C. R. Ball, C. E. Leighty, O. C. Stine, and O. E. Baker	77-160
and natural influences	107-110
conditions and outlook	147-160
cost	111-121
cost, examples of reckoning	119
cost, variation with region	114-118
exports and consumption per capita	159-160
financing	120-122
in 1919	440
in relation to population, graph	158
in United States	85-110

Wheat—Continued.

	Page.
production—Continued.	
in world	81-84
increase in 25 years	149-150
increase in United States	85-97
per capita, and yield per acre	432
relation to World War, etc., review	155-160
surplus and deficiency	130
world, graphs, 1891-1921	83
world, percentages for countries, map	82
world, trend	84
profit in growing, comparison with corn	104
quality—	
and receipts, graph	128
variation, etc., discussion	127-130
regions in United States of principal production, changes	88-96
seed treatment for disease	110
soft red winter, production, varieties, and use	123, 125
sowing dates, by States	775
spring—	
acreage in 1919	439
area	101
growing in relation to other crops	190
statistics—	
acreage, production, and exports, 1910-1921	71, 72, 74
acreage production, value, etc	520-538
production, graphic showing	86
production, value and exports	80
summary, 1919, 1920, 1921	770
storage in dry climate, note	132
value—	
in terms of other goods, discussion	147-148
of crop with comparisons	80
on farms, 1910-1921	163
values, comparison of purchasing power	148
weight per bushel, estimates 1902-1921	778
White Club, production and use	125
winter—	
acreage in 1919	438
advantages in growing, etc	100, 101
cost variations, graphs, and discussion	113
world production and exports	781
yield and value per acre, and price	528
WILCOX, R. H., E. W. SHEETS, O. E. BAKER, C. E. GIBBONS, and O. E. STINE, article on "Our beef supply"	227-322
Willamette Valley, wheat production	90
Wilt, cotton, cause and prevention	355-356
Wisconsin—	
farm, aid by home demonstration work	36-37
Madison forest products laboratory	53
wheat production periods	88, 89, 93
Wood—	
consumption and production	54
exports, statistics	745, 749, 768
imports, statistics	739-740, 749, 768
pulp, trade, international, 1909-1920, by countries	674
Woodlands, acreage in 1920	426-427
Woodlots, acreage and value	54
Wool—	
exports—	
statistics	740
world countries, 1909-1920	722
goat, camel, etc., imports, statistics	737
imports—	
statistics	737, 749, 753, 764
world countries, 1909-1920	722

Wool—Continued.	Page.
prices.....	720-721
production and value, 1919.....	486
statistics—	
production, 1909-1921.....	76
production, value, and international trade.....	718-722
world countries, 1910-1920.....	718
Work stock, cost of keeping, relative importance of items, by States.....	840
Workers, department, educational advantages.....	65-66
World—	
production and export trade, 10 great crops.....	781
War—	
effect on wheat prices.....	139-141
effect on wheat production.....	149
Worm—	
corn-ear, injury to corn, control studies.....	186-187
corn-root, injuries and control studies.....	187
Yields, wheat, changes in 25 years in United States.....	85-87
<i>See also</i> Statistics of all crops.	

ADDITIONAL COPIES
 OF THIS PUBLICATION MAY BE PROCURED FROM
 THE SUPERINTENDENT OF DOCUMENTS
 GOVERNMENT PRINTING OFFICE
 WASHINGTON, D. C.
 AT
 \$1.25 PER COPY

▽